MacWEEK®

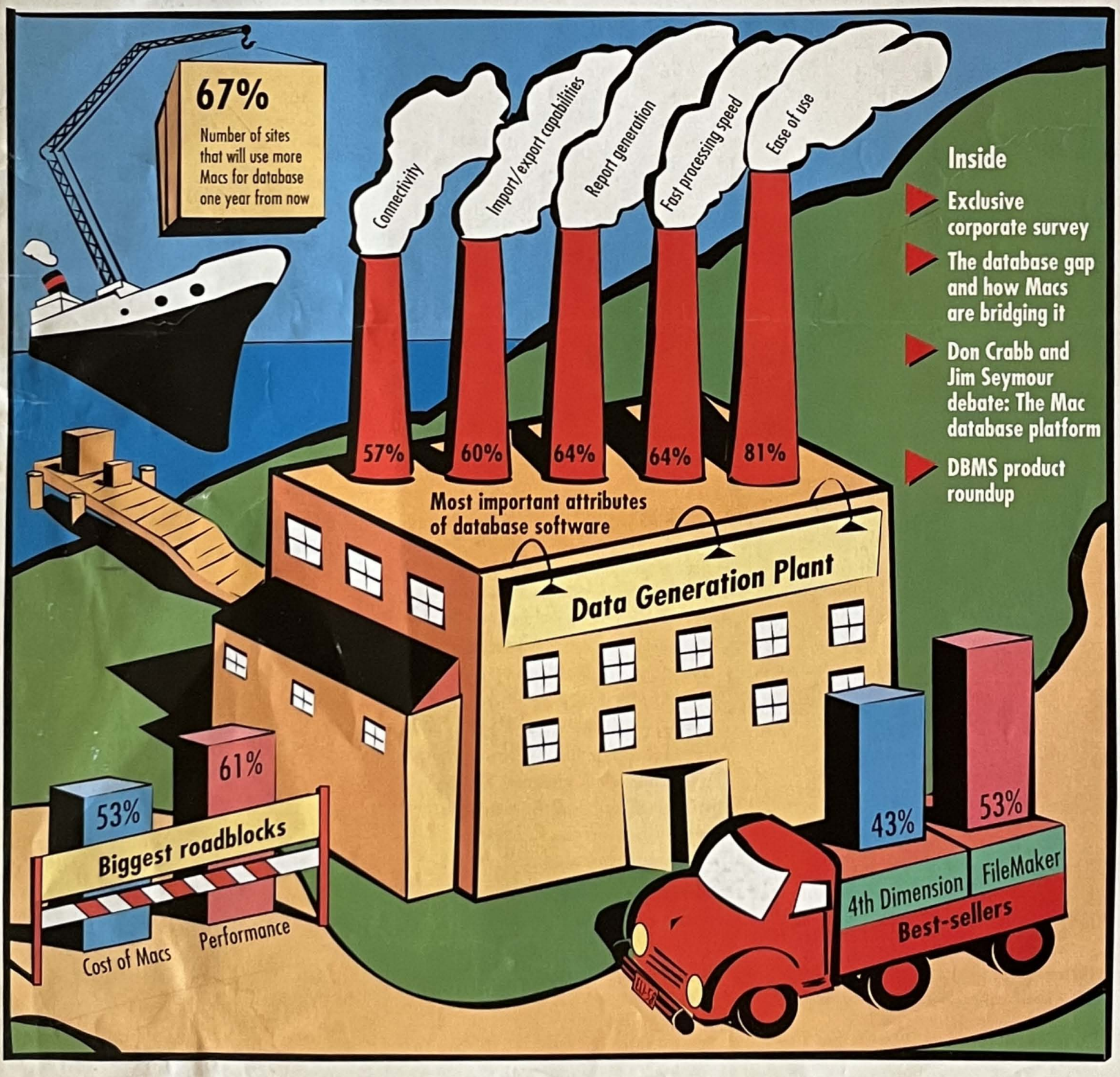
7 August 1990 Vol. 4 No. 27 WORKSTATION NEWS

Mail-order hard drives

More for your money or buyer beware? See ProductWatch

Do you need a film recorder in-house? See GA

Mac databases power up



Ist Dies Ein Volks Scanner?

CAERE®

The Ultimate T

TYPIST

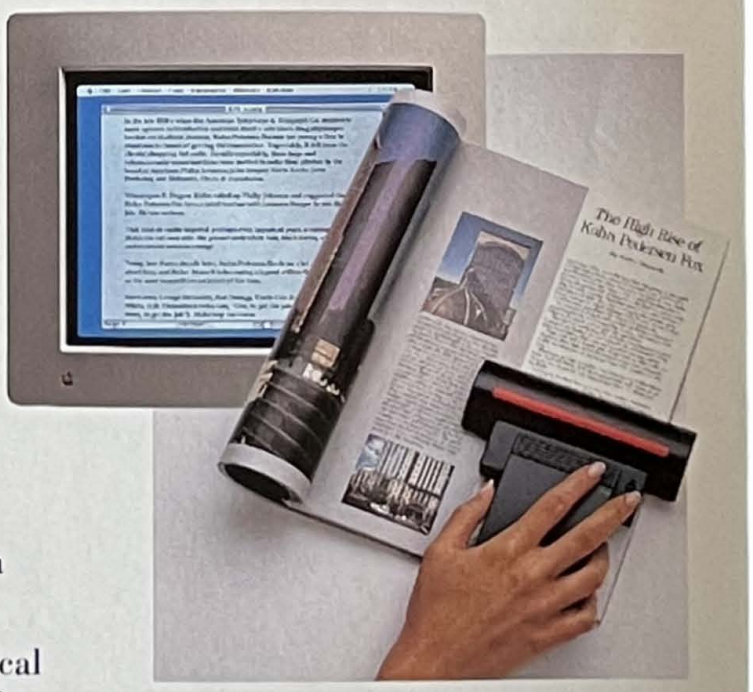
What if you could have an electronic assistant, capable of typing 500 words per minute, while sitting quietly at your side, and taking up no more space than a telephone?

Sound like a great idea?

That idea is now reality with the *Typist*™ from Caere.® Designed to be *the ultimate typing machine*, the *Typist* is capable of reading any text, no matter what style font, font size or column format, and entering it directly into your Macintosh® or PC compatible word processor, spreadsheet or database – without interruption. Caere, the company that pioneered Page Recognition with *OmniPage*® has now developed the world's most personal scanner.

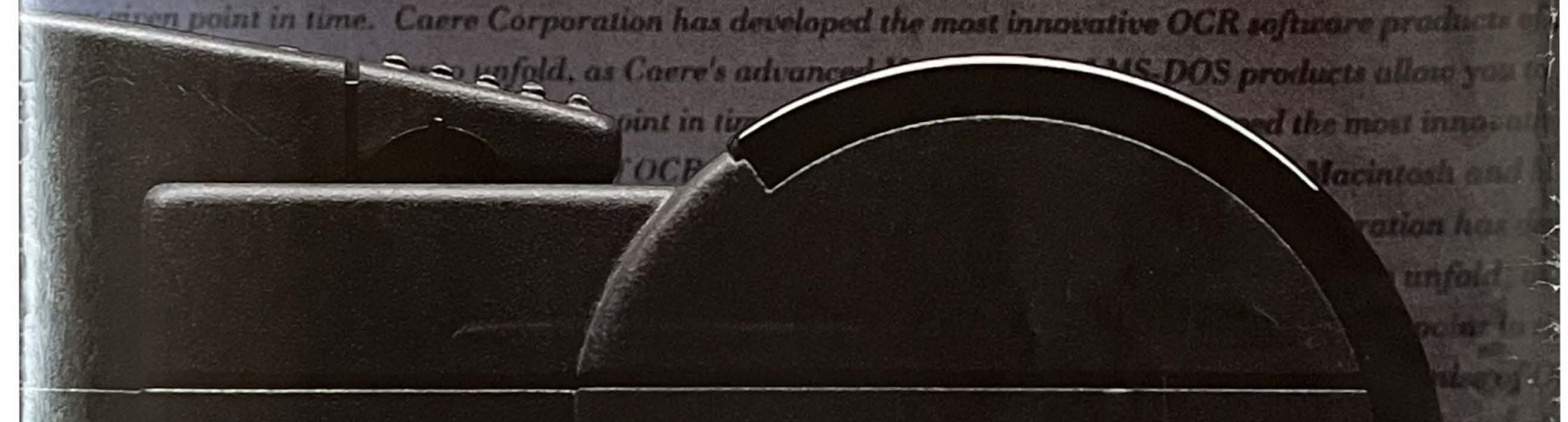
The *Typist* works like your own personal assistant, capable of typing 500 words per minute – as well as numbers – entering it directly into your software application just like a keyboard – only faster.

The *Typist* is more than a typical hand scanner, generally suited to scan graphic images, but limited when it comes to text. As the world's most personal scanner, the *Typist* is a sleek, ergonomically



The Typist lets you accurately insert text or numbers directly into a PC compatible or Macintosh word processor, spreadsheet or database – simulating keystrokes effortlessly.

yping Machine.™



designed peripheral that requires no special training or expertise. Select text or columns of numbers from any document, and the *Typist* enters your selection directly into your word processor or spreadsheet in whatever format you happen to be using – fully simulating your keyboard in every way. Scan up to 2 column inches per second, and the *Typist* will stay fully aligned – even when you scan rows and columns *sideways*.

Think of the possibilities.

Use the *Typist* as your very own *personal* assistant. Enter rows and columns of numbers from business journals or periodicals, directly into your most critical documents, including spreadsheets. Develop business reports, presentations, legal contracts, or desktop published documents in a fraction of the time. Further enhance your reports and presentations by incorporating graphics or photo images – the *Typist* makes it easy – improving your productivity whatever the assignment.

To learn more about the *Typist* and how it can be of assistance to you, contact one of Caere's participating dealers. Caere, the Complete Recognition Company.

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WITH GA
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◆ THIS WEEK IN REVIEWS ◆
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◆ NETMINDER ◆ TIMESLIPS ◆
PERSONAL LASERWRITER NT
◆ ETHERPRINT ◆ STUFFIT DELUXE ◆
ARANDA ◆ MACTOOLS DELUXE

Caere takes OCR in hand

Typist sends scanned text directly to apps

By Pamela Pfiffner

Los Gatos, Calif. — Caere Corp. may prove this week that a scanner in hand is now the equal of one on the desktop.

At Macworld Expo, Caere will unveil Typist, an all-in-one hand-held optical character recognition scanner that reads text at 500 words per minute and recognizes it on the fly. The $695 product will be available in September.

Caere's new Typist scans text into applications as if you typed it in yourself.

Hard copy can be scanned into any application, including databases, spreadsheets, HyperCard stacks, page-layout and telecommunications programs. Typist functions by interrupting keyboard operation and entering text into applications via the keyboard buffer, Caere said.

Recognized text appears in the document window almost immediately and may be preformatted for an application. For direct input to a

See Caere, Page 8

Oracle puts SQL server on Mac

Moves Mac into database big leagues

By Margie Wylie

Boston — Oracle Corp. this week will announce the first multiclient/multiserver SQL database for the Macintosh, a product that company officials said will change the way businesses use the Mac.

Due to ship in the first quarter of 1991, Oracle Server for Macintosh will be the first client/server SQL server to actually run on the Macintosh. Previous SQL database products for the Mac have depended on back ends running on DEC VAXes or other platforms.

"What this means for the Macintosh market is direct access to an industrial-strength database server, which is basically something that it has never had before," said analyst Marshall Moseley of Dataquest Inc. of San Jose, Calif. "This product should bring the market more on a par with what's available in the PC community."

Besides offering Mac users the strength, speed and power of a local SQL database server, the new Oracle software also will let Macs participate more fully in enterprisewide networks, the company said.

Based on the the company's Relational Database Management System 6.0, the server will work cooperatively with any of the other 80 platforms that Oracle servers run on.

"We like to think of our databases as promiscuous," said Marc Benioff, vice president of Oracle's Desktop Products Division. "Any Oracle Server can work with any other Oracle Server. It doesn't care

See Oracle, Page 8

Oracle Server — Specs

- First multiclient/multiserver SQL relational database to run on the Mac
- Supports queries across platforms as well as from other platforms
- Provides sophisticated network integrity controls for data management
- Compatible with existing Mac applications that access other Oracle Servers

October Macs: Names, ranks, serial numbers

By Raines Cohen

Cupertino, Calif. — Apple is rounding third base and heading for home in the CPU rollout as it prepares to launch the new fall lineup on Oct. 15. Sources said the names of the three machines are now at least etched in plastic, if not in stone: Macintosh Classic, Macintosh IIsi and Macintosh LC.

Developers and users alike are eagerly anticipating the new lower-cost, higher-volume machines. "It's absolutely wonderful if the price is right," said a developer aiming for the education market.

"There is a lot of interest in the expected October announcements here," said Harold Mignola, senior purchasing agent for BP Exploration Inc. of Houston. "Primarily, the interest is in a low-cost color machine that could support at least one emulation card. That's essentially a IIcx or IIci with one slot. A lot of users here don't use any slots other than the video card."

As reported (see MacWEEK,

See CPU, Page 8

Muse inspires new data outlook

By Daniel Farber and Henry Norr

Watertown, Mass. — Occam Research Corp. this week will announce Muse, an innovative data-analysis program that uses natural language queries to manipulate and visualize data.

Targeted at corporate users who must analyze large amounts of data, Muse understands queries written in English and can perform calculations and data representation and referencing simultaneously.

"This program is a quantum leap," said Forrest Jerome, director of product development systems at Colgate-Palmolive's Technology Center in Piscataway, N.J. "It has the potential to be a VisiCalc — people will buy computers just to use it."

Muse combines the functions of a spreadsheet and a relational database, and the link between them is the language, according to Neal Hill, chief operating officer of Occam.

"It's the most exciting database interface I've seen in a decade," said Andrew Seybold, publisher of the Outlook on Professional Computing in Santa Clara, Calif. "It's the future of computing. The plain-language querying and the way it builds spreadsheets and graphs makes it truly usable by users who aren't computer literate."

Data dictionaries provide the framework for making queries. A core data dictionary contains the base linguistic vocabulary, which is used to parse natural language queries. It also includes definitions of fundamental units,

See Muse, Page 8

New products heat up Boston expo

It's more than distance that separates the cool San Francisco spring expo and this week's hot Boston summer show.

The Mac community, reeling from the one-two punch of Apple reorganizations and Windows 3.0 announcements, is looking forward to a comeback with System 7.0 and the new, low-cost Macs.

To save wear, tear and shoe leather for Mac managers at the show (and expense-account budgets for those who didn't make the trip), MacWEEK editors beat the bushes for the best of the expo's hardware, software and networking products. Our 15-step guide to Macworld Expo begins on Page 10.

LATE NEWS

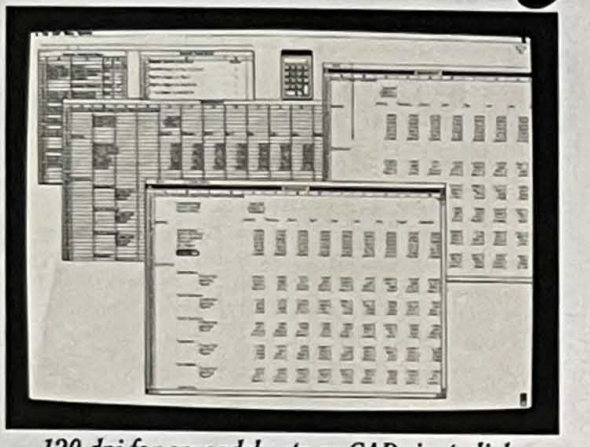
Ventura Mac Edition on 1990 horizon

San Diego — Ventura Publisher, one of the most popular desktop publishing programs for the IBM PC and compatibles, will be coming to the Mac before year-end. Ventura Software Inc., a Xerox company, will introduce Ventura Publisher, Macintosh Edition, at Macworld Expo. Pricing for the program, which sells for $895 on the PC, will be competitive with Mac DTP programs, a company spokeswoman said. □

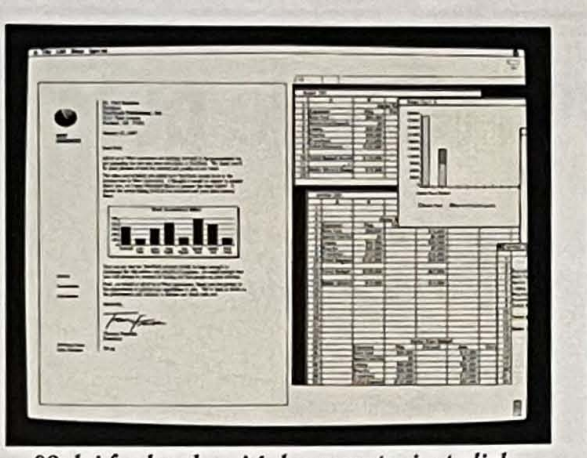
Apple's IIci cache card due next week

Cupertino, Calif. — Apple next week will release a cache card for the Mac IIci. Priced at $399, well below the level of current third-party offerings, the card offers 32 Kbytes of 25-nanosecond static RAM. Apple said it will improve the performance of the three-slot machine by 30 percent in some applications. □

Why pivot when you can click?



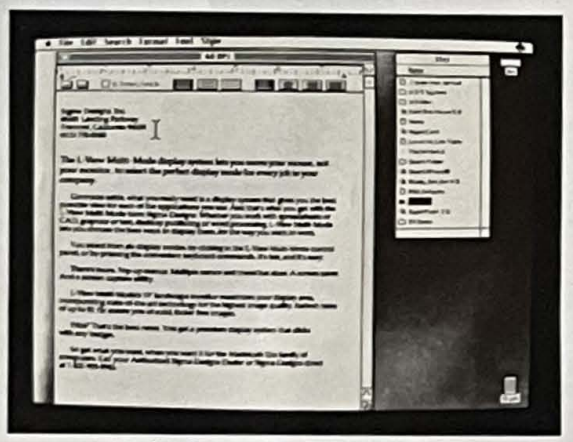
120 dpi for spreadsheets or CAD- just click.



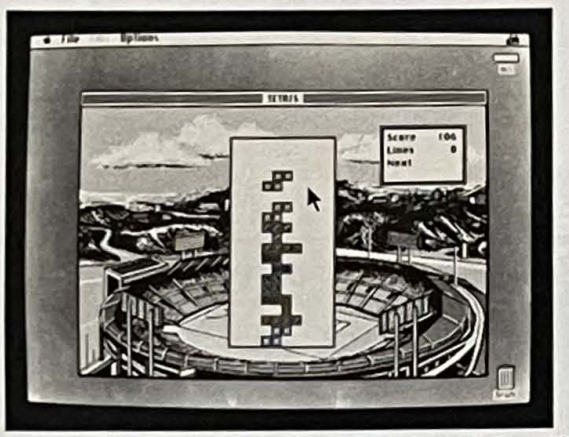
92 dpi for legal or A4 documents- just click.

The L-View Multi-Mode display system lets you move your mouse, not your monitor, to select the perfect display mode for every job in your company.
SIGMA DESIGNS

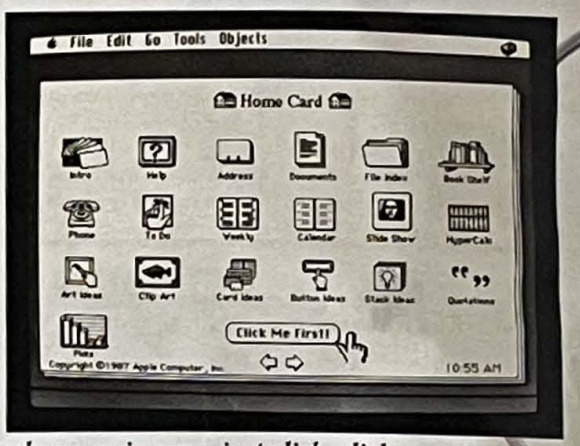
72 dpi for True WYSIWYG layouts- just click.



60 dpi for text entry- just click.



46 or 36 dpi for enlarged Macintosh 9 or 13-inch screen images- just click, click.



The 19" L-View® Multi-Mode™ display system lets you move your mouse, not your monitor, to select the perfect display mode for every job in your company.

Gimmicks aside, what you really need is a display system that gives you the best possible view for each of the applications you use. And that's what you get with the L-View Multi-Mode from Sigma Designs. Whether you work with spreadsheets or CAD, graphics or text, desktop publishing or word processing, L-View Multi-Mode lets you choose the best ways to display them...for the way you want to work.

The L-View Multi-Mode control panel lets you change display modes at the click of a mouse, or with user-configurable keyboard commands.

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There's more. Pop-up menus. Multiple cursor and menu bar sizes. A screen saver. And a screen capture utility.

L-View Multi-Modes's 19" landscape monitor maximizes your display area, incorporating state-of-the-art technology for the highest image quality. Refresh rates of up to 92 Hz assure you of solid, flicker free images.

Price? That's the best news. It clicks with any budget.

So get what you want, when you want it for the Macintosh IIxx family of computers. Call your Authorized Sigma Designs Dealer or Sigma Designs direct at 1-800-933-9945.

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See us at Macworld. Booth #824, Bayside Expo Center.

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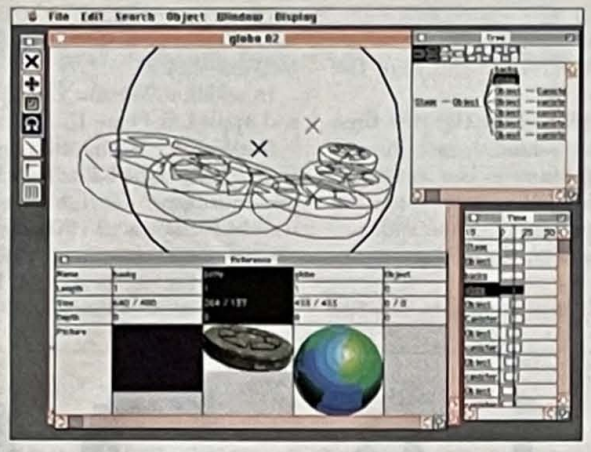

Paracomp has acquired rights to FilmMaker, a French animation program with a powerful path-animation editor. It will ship at Macworld Expo for less than $1,000.

Paracomp signs French animator

By Connie Guglielmo and Daniel Farber

San Francisco — Paracomp Inc. has acquired rights to FilmMaker, a French animation program, and will ship it at this week's Macworld Expo for less than $1,000.

Developed by Paris-based Encore Development, FilmMaker has been distributed in the United States for $1,995 since April by Advent Computer Products Inc. of Encinitas, Calif. (see MacWEEK, April 10).

According to Paracomp President Bill Woodward, the company not only has acquired publishing rights to FilmMaker but also has entered into a long-term joint development agreement with Encore.

FilmMaker can import PICT, PICS and Encapsulated PostScript files so objects created in Paracomp's Swivel 3D, Swivel 3D Professional and ModelShop, among other products, can be imported and animated.

"We looked at several programs," Woodward said, "but we found that only FilmMaker had a technology base that we could build on for the future. It's a much more full-featured animation tool than MacroMind Director."

FilmMaker includes four application modules — Animate, Color, Sound and Present — and five utilities. All of the modules render objects in eight- or 32-bit color with anti-aliasing, transparency, dithering and color remapping options.

Animations are created with a Bezier function that builds smooth animated paths; objects can be scaled and rotated along the animated path, which also can be edited.

"We've been using FilmMaker for two years," said Chris Krueger, principal designer at Arborescence, a San Francisco design firm. "Compared with other Mac products in the field, FilmMaker offers the highest-quality screen images because of its anti-aliasing, dithering and the color palette animation."

FilmMaker requires a color-capable Mac with 5 Mbytes of RAM, hard disk, 32-bit QuickDraw, and System 6.0.3 or higher.

Paracomp Inc. is at 1725 Montgomery St., Second Floor, San Francisco, Calif. 94111; (415) 956-4091. □

QuicKeys 2: Mean macro machine

By Henry Norr

West Des Moines, Iowa — Promising even faster and more-flexible ways to unlock the power of the Mac from the keyboard, CE Software Inc. this week will unveil QuicKeys 2, a new version of its popular macro utility.

Due Sept. 15 at an enhanced price of $149.95, the new release features more-convenient ways to build sequences, or multistep macros. The separate operations that make up a sequence no longer will need their own key equivalents and can be hidden from view to simplify selection among available macros. Two improved recording options also have been added.

Other new features include:

▸ **A redesigned interface.** QuicKeys now will be accessible directly from the Apple menu or via a hot key. The program's pop-up Quick Reference card, where all macros are listed, is now "hot": Users can activate a macro simply by clicking on it.

▸ **Auto-launching.** The capabilities of QuickTimer, QuicKeys' timed auto-launch facility, now can be built into any macro. A sequence that works with CE's DiskTop to back up all newly created files, for instance, could be timed to run at the end of each day.

▸ **Externals.** Procedures coded in C, Pascal or assembler can be attached to a keystroke.

The program will ship with what John Foster, product manager, called "a lot of cool examples" ready to use, including a macro that provides automatic saving at specified intervals.

Upgrades will be $49.95, or $24.95 to customers buying the current version, 1.2, which is priced at $99.95, after Aug. 1. CE Software plans to announce an upgrade path for owners of two other macro utilities, Tempo and AutoMac III.

CE Software can be reached at P.O. Box 65580, West Des Moines, Iowa 50265; (515) 224-1995. □

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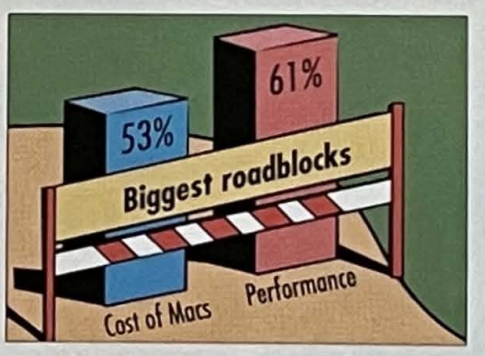

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Cover illustration by Nevin Berger

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NetWare: Still no direct Mac link

By Margie Wylie

Provo, Utah — Users impatient for direct support for Macs on NetWare 386 networks will have to wait until at least the end of the year, Novell Inc. said last week.

For now they'll have to settle for an update to NetWare for Macintosh, which runs as a VAP (value-added process) in the Intel-based NetWare server and acts as a gateway that translates between AppleTalk and NetWare conventions.

Version 2.0 of the VAP, like its predecessor, will bridge the NetWare 386 network but does not provide the native support the company promised when it released NetWare 386.

Originally due in the third quarter, a module providing native AFP (AppleTalk Filing Protocol) services for NetWare 386 is now expected at the end of the year, the company said.

The updated VAP will for the first time allow some NetWare administration directly from the Mac. Administrators can create and delete user accounts; set security for users, files and folders; and create, delete and control network print queues from Macs on the network.

The VAP also brings the extended-file attributes introduced with NetWare 386 to Mac networks bridged to 386 servers via NetWare v2.15C.

In addition, Version 2.0 supports AFP 2.0 and AppleTalk Phase II.

NetWare for Macintosh ships free with NetWare v2.15C, which lists for $3,295 to $4,995, depending on configuration. Users who bought NetWare v2.15C before Aug. 1 can update for $200 by calling (800) 873-2831.

Novell Inc. is located at 122 East 1700 South, Provo, Utah 84606; (801) 379-5900. □

Mass Micro, Advent to unveil video products

By Connie Guglielmo

Boston — For users looking for a way to take Mac graphics out to videotape, Mass Microsystems Inc. and Advent Computer Products Inc. will be unwrapping new low-cost products at Macworld Expo.

Mass Microsystems. The EasyVideo 8 is a half-size NuBus board that the company said will be priced at less than $800 when it ships next month. The card converts Mac graphics to standard NTSC (National Television System Committee) video signals, allowing users to output eight-bit color graphics and presentations to tape.

The board can drive a second video display so users can preview Mac graphics in NTSC format before committing them to tape.

It connects to external video devices via an RCA cable connector, which must be purchased separately.

In the works, but not on display at the expo, is the EasyVideo 8/24, an external converter box that takes signals off Mac eight- and 24-bit color displays for output to video. To be priced at less than $500, it is due this fall.

Advent. The new Neotech Color Video Encoder is an external box that transfers RGB (red, green, blue) signals to videotape.

The encoder, due in September for $399, works with Mac graphics cards such as Apple's Display Card 8•24 and Radius Inc.'s DirectColor/GX, which generate an interlaced RGB video signal. This provides a flicker-free image when converted to NTSC, unlike many Mac graphics boards that produce a non-interlaced RGB signal.

The Neotech encoder also offers a "pass-through" connection, allowing users to hook up either a standard Mac RGB (non-interlaced) monitor or a multisync (interlaced) monitor. The Mac monitor, therefore, does not have to be disconnected when users want to operate in RGB mode.

Mass Microsystems is at 810 W. Maude Ave., Sunnyvale, Calif. 94086; (408) 522-1200.

Advent Computer Products Inc. is located at 449 Santa Fe Drive, Suite 213, Encinitas, Calif. 92024; (619) 942-8456. □

Apple, Outbound reach pact

Boulder, Colo. — Apple and Outbound Systems Inc. said last week that they have reached an agreement about the technology on which Outbound's Mac-compatible portable is based.

Identical announcements from both companies said the agreement concerned "Outbound's infringement on Apple's intellectual-property rights." While neither company disclosed details, sources said Apple has purchased rights to Outbound-developed technology and is licensing it back to Outbound (see MacWEEK, July 31). Outbound will continue to sell its laptop system. □

The desktop Mac with more tha

RasterOps boards for 13-inch screens

By John Webster

Santa Clara, Calif. — Streamlining and accelerating its graphics-board line, RasterOps Corp. this week will introduce small-screen versions of its latest eight-bit and 24-bit graphics boards.

Due next month, the 8S and 24S will work with Apple's 13-inch color monitor and compatible displays. Standard RasterOps features, including hardware pan and zoom and extended desktop mode, are included. Since the boards support NuBus block-mode data transfer, they will work with the RasterOps Accelerator, the company's $495 32-bit QuickDraw graphics accelerator board.

The eight-bit color 8S will retail for $695. The 24-bit color 24S will be available only in a $1,195 bundle with the accelerator. A $495 upgrade kit adds enough memory to the 8S to work with 24-bit color images.

When the boards are used with the accelerator and block-mode transfer, 32-bit QuickDraw commands are executed up to 600 percent faster than with non-accelerated boards, according to RasterOps.

With the $695 RasterOps Video Expander, users can record NTSC (National Television System Committee) or PAL (a European video standard) images from the new boards to videotape.

The new boards complement RasterOps' 8L and 24L, large-screen boards with block-mode capabilities, which were introduced in June. RasterOps said that during the next year it may discontinue manufacturing some of its earlier display cards that do not support block-mode transfer, but it will continue to support all of them.

RasterOps Corp. is at 2500 Walsh Ave., Santa Clara, Calif. 95051; (408) 562-4200. □

intosh for people
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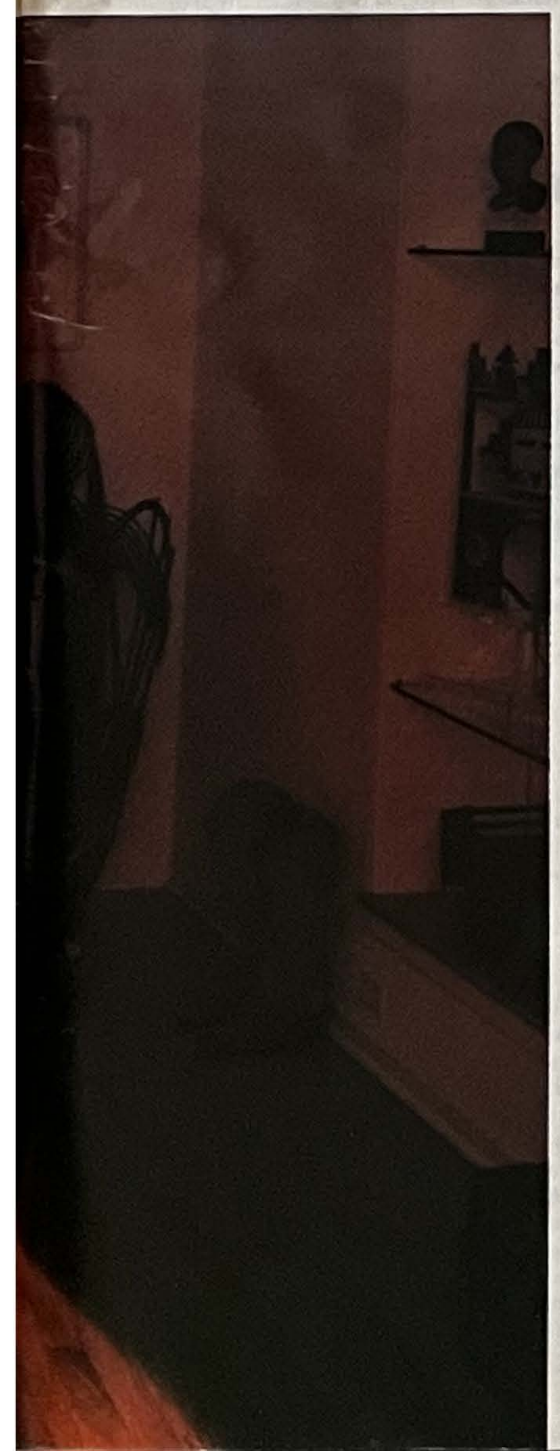
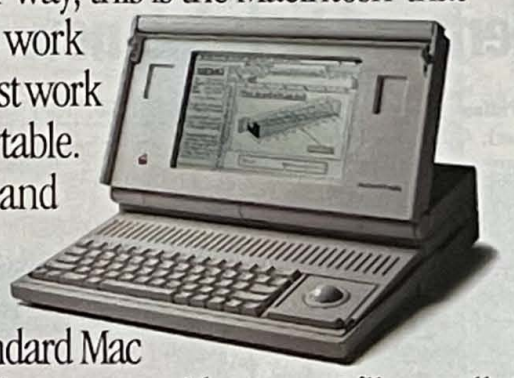


Think of it as the office Mac® you can take home with you. Or the Mac for the home that's capable enough to use at the office. Either way, this is the Macintosh® that gives you the freedom to work where you can get the most work done. The Macintosh Portable.



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New Alisa message switch links Mac and VAX mail

By Margie Wylie and Carolyn Said

Pasadena, Calif. — Riding on the conviction that it can win the business of smaller shops in the face of the Apple/Digital Equipment Corp. alliance, Alisa Systems Inc. last month launched a slew of new mail, conferencing and communications products for the Mac-to-VAX market.

"We're not about to fade away from this business and the proof will be seen over the next few weeks," said Alisa vice president Donald Cole.

▸ AlisaMail, a VAX-based store-and-forward message switch, available now, integrates Microsoft Mail and DEC's VMS Mail system. In conjunction with DEC's Message Router/MailBus services and MRGATE gateway, mail exchange is also possible with DEC's ALL-IN-1, IBM PROFS and X.400 services.

AlisaMail consists of the Information Switch — a VAX-based SQL database engine that stores directories and messages, routes and translates messages, and maintains a transaction log — and a Microsoft Mail server and VMSmail server, both running on a VAX. AlisaMail costs from $8,000 to $17,500, depending on configuration. Alisa plans a 1991 release for a version that works with CE Software Inc.'s QuickMail.

▸ MailMate/MM, a gateway between Microsoft Mail and DECnet-based mail services, offers transparent routing, one-time addressing from within Microsoft Mail and the capability to store frequently used DECnet mail addresses in the Mail directory. To ship this week, MailMate/MM costs $450 for up to 10 users, $1,150 for up to 30 users, $2,450 for up to 100 users and $4,950 for an unlimited number of users.

▸ MailMate/QM, Alisa's bridge between QuickMail and DECnet mail services, will be enhanced later this month with expanded address mapping. Its price structure is the same as that of MailMate/MM.

▸ MaxNotes Version 1.1 is scheduled to be released this month for $295. The program, which lets Mac users participate in electronic conferencing using DEC's VAXNotes, now supports AppleTalk as well as DECnet and uses the more intuitive Mac interface.

▸ TSSNet, a DECnet protocol stack for the Mac, was recently upgraded to Version 2.0. TSSNet lets Macs "speak" native DECnet protocols to access VAXes and includes applications that let Mac users send and receive VMSmail and transfer files between the Mac and VAX. Version 2.0 still provides the Cterm communications protocol but now also ships with the faster local-area transport protocols and comes bundled with White Pine Software Inc.'s Mac220 emulator. A new, more Maclike interface on the file transfer utility allows window-to-window copying. TSSNet 2.0 costs $195, down from $495 for previous versions.

Alisa Systems is at 221 E. Walnut St., Suite

4D 2.1, compiler speed performance

Update improves use of memory

By Daniel Farber

Cupertino, Calif. — ACIUS Inc. has begun shipping Version 2.1 of its 4th Dimension relational database as well as its new 4D Compiler.

Version 2.1, which remains at $795, offers improved memory management as well as compatibility with the new compiler and the forthcoming 4D Environment, a suite of miniapplications tightly integrated with the database (see MacWEEK, April 10).

The new memory-management scheme allows users to run 4D applications on 1-Mbyte Macs, the company said. Under MultiFinder, applications can run with as little as 512 Kbytes of memory.

"The more efficient memory management lowers the cost of installing a system," said beta-tester Tony Oppenheim, president of Options Computer Consulting in New York. "Users with low-memory machines can now effectively use 4D applications."

Other features new to Version 2.1 include:

- Automatic Deletion Control, which maintains the integrity of data residing across related files. When turned on, the feature ensures that deleting one record from a database will not delete related records.
- Nine new commands and enhancements to existing commands, including support for multiple transactions and the capability to display external programs in their own windows.

The $995 4D Compiler generates database applications that run three to 1,000 times faster than uncompiled versions, according to the company.

"The 4D Compiler will allow 4D applications to be more competitive with commercial applications written in compiled languages like Symantec's Think C," said Oppenheim. "You get incredible speed benefits."

The compiler can turn 4D databases into double-clickable stand-alone programs by merging a copy of 4D Runtime with the application. Developers are still required to purchase Runtime for each copy of the application they sell, ACIUS said.

The compiler also functions as a debugger, detecting logical and lexical errors and generating a list of errors and symbols. Under MultiFinder, the compiler and 4D work interactively: When it opens a database, it also opens the error file generated by the compiler and highlights and explains each error.

Separately, ACIUS last week published the 1990 edition of its Solutions Directory. Available from the company for $25, the directory lists registered 4D developers, products and services in the United States and Canada.

Registered 4D users can upgrade to Version 2.1 free. Registered developers are entitled to a 30 percent discount on the 4D Compiler. Miniapplications for the 4D Environment — separate word processor, spreadsheet, drawing and business graphics modules — are due to begin shipping in September.

ACIUS Inc. is at 10351 Bubb Road, Cupertino, Calif. 95014; (408) 252-4444. □

4th Dimension 2.1 and 4D Compiler

Upgrade

4th Dimension

- Runs under MultiFinder with 512 Kbytes of memory
- Compatible with forthcoming "4D environment" add-ons
- Automatically ensures data integrity across related files

4D Compiler

- Runs applications three to 1,000 times faster
- Has interactive debugging
- Generates true stand-alone applications

For the Record

In the July 31 issue, MacWEEK reported on UPS 4 MAC Version 2.0 from Software Design & Consulting of Milwaukee. The name of the shipping program has been changed to Shipping 4 MAC, Version 2.2.

The phone number listed for The HyperMedia Group in the July 31 issue was incorrect. The correct number is (415) 601-0900.

In the same issue, we printed SoftView Inc.'s new address with an incorrect ZIP code. The company's correct address is 1721 Pacific Ave., Suite 100, Oxnard, Calif. 93933.

Artist board paints CAD drawing faster

By Rochelle Garner

St. Paul, Minn. — Artist Graphics Inc. this week will begin shipping its Artist XJS display-list accelerator.

The board, which speeds up pans, zooms and redraws in some vector-based CAD applications, currently supports Autodesk Inc.'s AutoCAD and Amiable Technologies Inc.'s FlexiCAD software (see MacWEEK, April 10).

The $3,495 base configuration comes with 1 Mbyte of video RAM and 1 Mbyte of display-list memory. A $4,295 model includes 2 Mbytes of VRAM. Display-list memory can be expanded up to 4 Mbytes; add-on modules are $995 per Mbyte.

In its base configuration, Artist XJS can display up to 256 colors at 1,024 by 768 pixels or up to 16 colors at 1,280 by 1,024 pixels. Additional VRAM permits 256 colors at the higher resolution. The board, which does not require additional graphics cards, primarily supports 19-inch multisynchronous monitors at 60-Hz to 78-Hz refresh rates.

Artist Graphics Inc., a Control Systems Inc. company, is at 2675 Patton Road, St. Paul, Minn. 55113; (612) 631-7800; (800) 627-8478. □

Broderbund to bring new twist type to expo

By Pamela Pfiffner

San Rafael, Calif. — Broderbund Software Inc. will show more twisted type at Macworld Expo this week as well as bigger words and letterheads.

A new version of Broderbund's type-manipulation program, TypeStyler 1.5, will be on sale at the show, and the company will introduce Letterhead, a new utility for creating "electronic stationery," and BannerMania, an application for making signs and banners.

- TypeStyler 1.5 offers several new text-shaping capabilities. Any straight line within an object now can be converted into a Bezier curve, allowing users to match individual character lines to the bounding box more precisely. Users also can impose constraints on characters in a text object, such as keeping side bearings parallel throughout a text block, and rotation can be specified by degrees.

In addition to producing more-accurate screen images, the program now converts all style variants within a font family into TypeStyler's SmoothFont format. Users can designate specific point sizes for text. In earlier versions, text appeared at a default size, which users had to shrink to size.

Upgrading to the new version costs $25, but users who purchase Version 1.5 within 90 days after buying an earlier version may upgrade for free. Those who buy TypeStyler 1.5 from a retailer at Macworld Expo will receive a free SmoothFont Sampler disk with 10 fonts converted into TypeStyler's SmoothFont format.

Broderbund Software's BannerMania includes a feature called Transmogrify, which lets users scroll through options until the best effect is found. Users can then lock in those attributes and experiment with others.

- Letterhead is a $99.95 utility that lets users create personalized "electronic stationery" with graphics that appear in the background on documents printed from any application. Encapsulated PostScript, PICT, Paint, Glue or TIFF files can be captured as templates, which are then listed in the Page Setup dialog; the background design selected by the user is automatically merged with the document as it is printed or transmitted via fax modem.

Slated for release in late October, Letterhead will ship with 50 predesigned backgrounds.

- Already out on the MS-DOS side, BannerMania is a $59.95 application that lets users create banners and signs up to 6 by 9 feet. Text is limited to two lines of 45 characters each. Type options include 19 Adobe Type 1 fonts and 27 design effects similar to those found in TypeStyler.

For color output, BannerMania has 134 preset colors. A feature called Transmogrify lets users set a few desired attributes, such as message and size; the program then scrolls randomly through other options, such as type style and color scheme, allowing the user to choose the best combination. BannerMania is scheduled to ship next month.

Broderbund Software Inc. is located at 17 Paul Drive, San Rafael, Calif. 94903; (415) 492-3200. □

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BPA

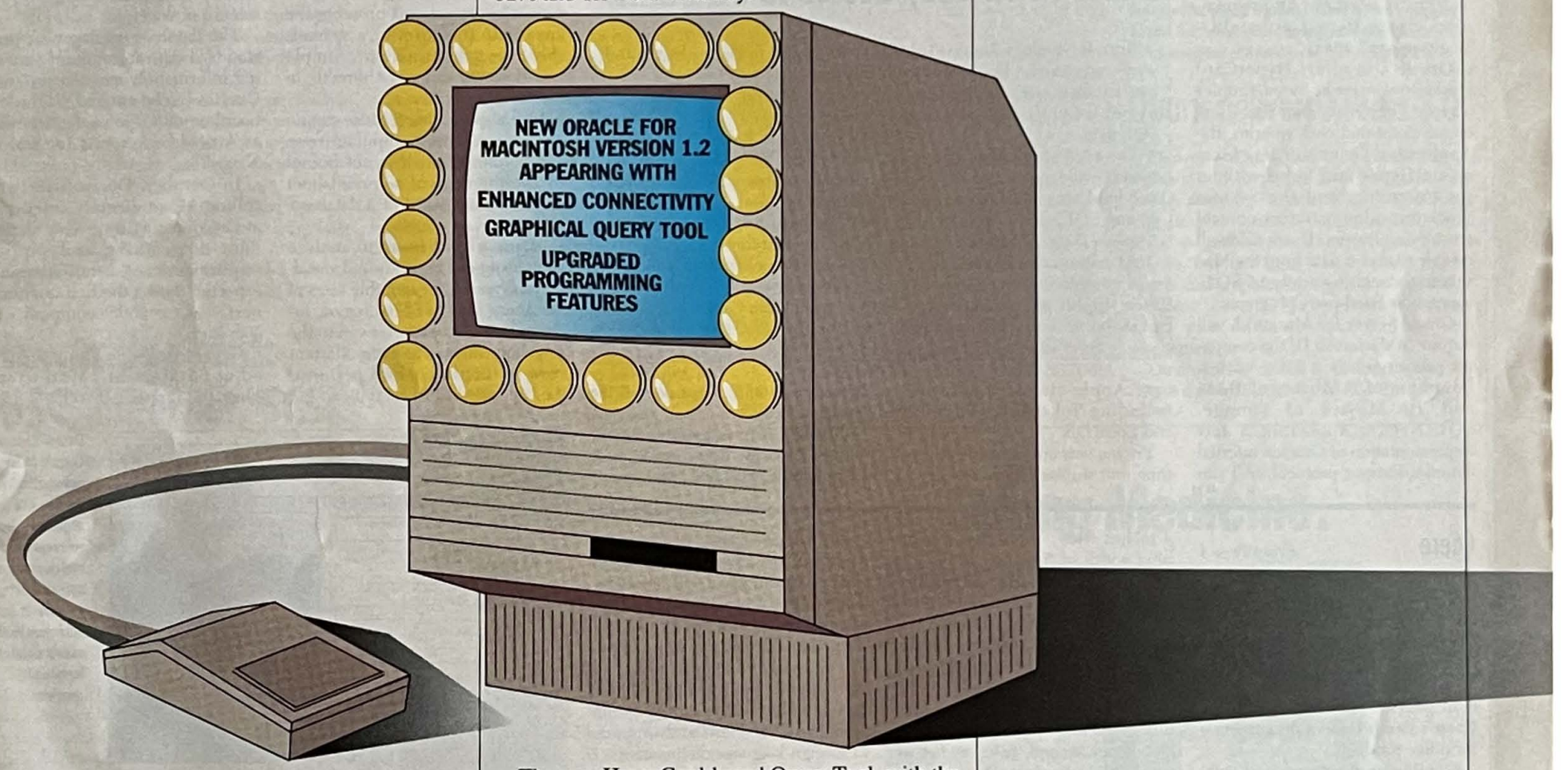
The Mac SQL Sequel

The first SQL database for Macintosh has enhanced connectivity and a new graphical Query Tool.

The first version of ORACLE for Macintosh was a big hit. Industry analysts gave it a thumbs up. Thousands of users gave it their support. And InfoWorld Magazine gave it Product of the Year.

Now Oracle announces ORACLE for Macintosh Version 1.2, with enhancements for both end users and developers.

Improved connectivity options make it even easier to access corporate data on servers, minis and mainframes. Version 1.2 supports virtually any network. Including Async, Apple's MacTCP, Novell's TCPort, Alisa's TSSnet, DCA's MacIRMA 3270 and Tri-Data's Netway.


NEW ORACLE FOR MACINTOSH VERSION 1.2 APPEARING WITH
ENHANCED CONNECTIVITY
GRAPHICAL QUERY TOOL
UPGRADED PROGRAMMING FEATURES

The new HyperCard-based Query Tool, with the enhanced Application Generator and System Stack, lets users point and click to query data and then automatically transfer it to their favorite programs such as Excel, Wingz or Word. All without knowing SQL or writing code.

The Database Version includes the ORACLE database, Query Tool, Application Generator, System Stack, Hyper*SQL and Pro*C for $699. The Networkstation Version comes with everything but the database for only $299. And the Networking Option for Macintosh is just $299.

ORACLE for Macintosh Version 1.2 is backed by the largest database consulting and support organization of any software company.

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Oracle

From Page 1

if it's on a VAX, or a Mac, or OS/2, or Unix or what."

Like other Oracle 6.0 SQL servers, this one supports sophisticated network-integrity features, such as transaction processing; logging; and automatic system recovery, including full roll-forward and roll-back, the company said.

A Macintosh application lets administrators control the Oracle server's users and security.

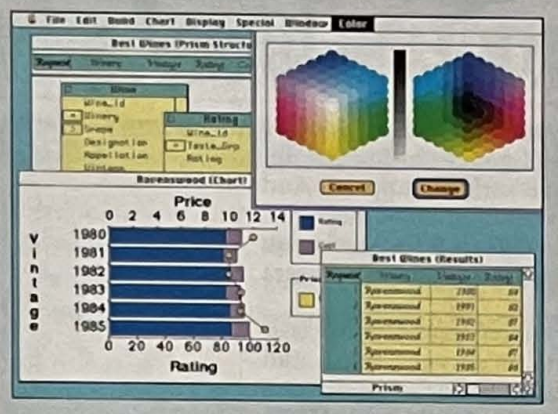
Existing SQL*Net applications will not port to the new server's environment, but Oracle will provide several ways for users to get at their data. Oracle's Hyper*SQL and Pro*C interfaces let programmers create HyperCard and C-language applications.

Oracle also offers HyperCard stacks to users who need simpler access. The Query tool lets users create point-and-click queries, the Application Generator lets users create HyperCard forms without programming, and the System Stack lets administrators control security and users. Users also will be able to access data from the Mac server through a variety of SQL-compatible third-party programs.

Oracle Server for Macintosh will require a Macintosh II; the company recommends a IIfx, with a minimum of 8 Mbytes of RAM and 10 Mbytes of storage. SQL*Net for AppleTalk, a new implementation of Oracle's internal communications protocol, will run over Apple-standard networks, including TokenTalk, EtherTalk and LocalTalk.

Pricing was not available at press time, but similar Oracle servers for Banyan and OS/2 networks sell for less than $5,000.

Oracle Corp. is located at 500 Oracle Parkway, Redwood Shores, Calif. 94065; (415) 506-7000. □



Brio Technology's DataPrism, a new SQL database tool designed to let users make complex queries without learning the database language's cryptic commands, has a variety of charting options built in.

DataPrism: Easy access to SQL data

Brio Technology Inc. will this week announce DataPrism, a new database query tool designed to put a familiar Mac face on SQL data.

The $435 application, due next month, will work with networked and local Oracle database servers or any SQL server accessible by Apple's Data Access Language (DAL), formerly called CL/1.

A completely graphical interface shields users from cryptic SQL commands while letting them make fairly sophisticated requests.

With data in Mac, users can sneak a preview, join two tables by drawing a line or generate a color chart. The program can create and combine line, scatter, bar or stacked-bar graphs. Data can be exported in SYLK, WKS, WK1 and text formats.

Brio Technology Inc. is located at 444 Castro St., Suite 810, Mountain View, Calif. 94041; (415) 961-4110. — *By Margie Wylie*

Muse

From Page 1

such as monetary equivalents, and formulas such as standard arithmetic functions.

Users can create dictionaries or supplement existing ones, adding lists, values and terms to accommodate specific applications. Muse applications can have any combination of up to 16 data dictionaries and DataBooks, each of which can contain up to 64,000 relational tables, open simultaneously.

Users can construct queries such as "What are the weekly sales quotas by sales person for international divisions?" and the program automatically accesses the relevant information and presents the answer in the form of a spreadsheetlike grid or a chart. Simple questions are answered directly in text form.

Like a spreadsheet, Muse can do calculations and manipulate rows and columns, but it is not bound by the topology of a spreadsheet or the file structure of a database, Hill said.

"Muse allows users to analyze complex queries quickly and visually. You can ask for monthly sales of the Acura Integra GS by region, for example. If you want to swap to the rows and columns to get a different view of the data, Muse performs the task automatically. You can follow up by asking to look at sales of the car within each region by dealer, and the information is automatically displayed," Hill said. "You could do this with a spreadsheet, but you would have to rip apart the data to do it."

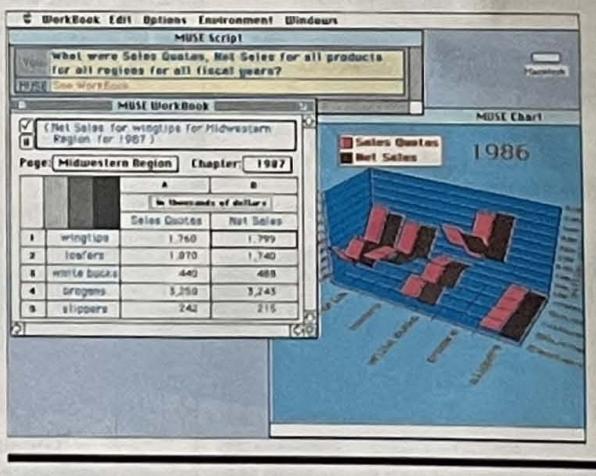
"We collect a lot of data on consumers and on our businesses in 60 countries, and we sometimes suspect there's more in there than we are using," Jerome said. "We see Muse as something that will let us analyze data in ways we've never been able to before."

The program can display data in 2-D or 3-D charts. In addition, the program offers a simple kind of animation effect by flipping screens of data.

The database manager supports standard data formats for importing information into the program. Queries can be entered via the keyboard or with a voice digitizer such as Articulate Systems Inc.'s Voice Navigator.

In October, Occam will begin selling Muse directly to corporate accounts, with pricing dependent on training and support requirements. A retail version is expected during the first quarter of next year for $695, company officials said.

Occam Research Corp. is located at 85 Main St., Watertown, Mass. 02172; (617) 923-3545. □



Occam Research Corp.'s Muse automatically locates and organizes the relevant data and generates spreadsheets and charts in response to the user's natural language queries.

Caere

From Page 1

word processing program, for example, users can change text alignment or type style prior to scanning; the text appears in the document in the new format.

"It enters text as if you had typed it in yourself," said Larry Miller, Caere's vice president of marketing for office products.

Combining hardware and software into one compact device, Typist is designed for users who do not want the expense or need the features of a desktop scanner and OCR, Miller said.

Unlike many hand-held scanners, which have scanning paths of 4 inches wide, Typist has a scanning width of 5 inches, making it possible to scan letter- or A4-size documents in two horizontal passes. A window in the scan head lets users align text. One wide button lets both left- and right-handed users activate scanning easily.

Typist has true 300-dpi resolution. Scanning speed is rated at 2 inches per second, twice as fast as competitive products, Caere said. Faster scanning speed as well as five rollers make it easier for users to maintain a steady speed and straight motion when dragging the scanner across a page.

The software is provided on a disk and loaded into the machine as a desk accessory. Typist uses AnyFont, the core technology of Caere's OmniPage OCR software. Unlike OCR programs that recognize bit-mapped shapes, AnyFont recognizes identifying characteristics of each letter, resulting in more-accurate recognition, Miller said. It reads fonts in any size from 6 points to 72 points and supports 11 foreign-language dictionaries.

Typist automatically senses the scanning direction — horizontal or vertical — and stitches together overlapping horizontal scans. When scanning in side-by-side columns, Typist will read the column centered in the scan window and ignore the incomplete columns on the side. Other options include "read right column only" or "read right to left."

Typist has automatic contrast control. To adjust contrast, users set the unit over a representative cross-section and push the scan button to set 100 degrees of contrast.

Although it is positioned as a dedicated OCR device, Typist can scan in graphics as line art or in three dithered black-and-white modes. The software includes basic image-capture capabilities, but images can also be exported to graphics applications in PICT or TIFF formats.

Typist ships with power supply and SCSI interface. A minimum 4 Mbytes of RAM is recommended.

Caere Corp. is located at 100 Cooper Court, Los Gatos, Calif. 95030; (408) 395-7000. □

Three years ago in MacWEEK

August 11, 1987: "Apple this week will introduce the next strategic leap in the evolution of the Macintosh: HyperCard. ... The announcement that HyperCard will be bundled with every Macintosh ends months of speculation over which arm of Apple — the company or its new software subsidiary, Claris Corp. — will control the destiny of this freeform 'personal toolkit.'"

In retrospect: HyperCard has largely borne out the high expectations for it, but the bundling issue has resurfaced and observers expect it soon to be passed off to Claris.

CPU

From Page 1

July 10), the Macintosh Classic replaces the Mac Plus and SE in the compact line. The IIsi, with its 20-MHz 68030 and single slot, will serve as a high-performance, lower-cost color CPU. The 68020-based LC is intended for the home and education markets.

Configurations with 2 Mbytes of RAM and 40-Mbyte hard disks are expected to list at about $2,000 for the Classic, $4,200 for the IIsi, and $2,500 for the LC, excluding the Apple IIe emulation card.

The Macintosh LC (the "LC" stands for "low cost") is not expected to ship until next year.

Sources said Apple is still debating whether the LC will offer built-in four- or eight-bit color. The machine's Apple IIe emulation needs only four-bit color, while most mainstream Mac color applications assume the presence of eight-bit color.

Volume production on the Macintosh IIsi and the Classic will begin in mid-September, sources said, assuring dealers a plentiful supply the day of the announcement. □

PixelPaint Pro gets bigger picture

Boston — SuperMac Technology will announce a major new version of PixelPaint Professional, its 32-bit painting program, at Macworld Expo this week.

Version 2.0, due in the fourth quarter, offers a new virtual-memory scheme for handling large images and opening multiple documents; eight-bit masking; and a wet-paint feature that lets users create and edit objects before pasting them into the paint layer. □

Odesta plans faster Double Helix 3.5

By Daniel Farber

Northbrook, Ill. — Odesta Corp. this week will announce a new version of Double Helix, its multi-user relational database for Macintosh and DEC VAX environments.

To ship in the fourth quarter, Version 3.5 will offer faster performance, an improved user interface and new utilities for viewing the structure of applications, Odesta said.

▸ Querying a database and opening and generating forms and reports will be up to 800 times faster than with the previous version, 3.0, company officials said.

▸ The user interface has been enhanced with pop-up menus, check boxes and radio buttons, and the 64-Kbyte limit on graphics has been eliminated.

▸ A Get Info tool will let developers view information about the structure of an application. A "shrinkage" utility compresses applications after data has been removed to save disk space.

Like the current version, the new release will be priced at $595. Upgrade pricing has not been established.

Odesta Corp. is at 4084 Commercial Ave., Northbrook, Ill. 60062; (708) 498-5615. □

Newbridge card: RISC, Ethernet, SCSI

Kanata, Ontario — Newbridge Microsystems last week announced a programmable multifunction NuBus coprocessor card based on a 33-MHz version of the Am29000 RISC (reduced instruction set computing) chip.

The chip is the same one adopted by Apple for its 8•24GC QuickDraw accelerator, and Newbridge initially will market its card as a graphics accelerator under the name NewLife IAC (Image Accelerator Card).

The Newbridge card, however, also provides a thin Ethernet connector and an independent high-speed SCSI port designed for driving devices such as typesetters. The card can hold up to 16 Mbytes of memory and supports the full NuBus master/slave specification, the company said.

Newbridge is seeking developers and integrators to develop additional applications for the programmable processor, which is due in December for $2,100.

Newbridge Microsystems is located at 603 March Road, Kanata, Ontario K2K 2M5; (613) 592-0714. □

Micron gives images the squeeze

By Connie Guglielmo

Boise, Idaho — Micron Technology Inc. is readying a plug-and-play system for 24-bit color-image compression and decompression.

The Micron Xceed ICDP-II compression/decompression accelerator card works with Joint Photographic Expert Group-compliant PicturePress software, developed by Storm Technology of Palo Alto, Calif. Due next month for $1,995, the system allows users to shrink images without loss of quality at user-selectable ratios up to 80-to-1, although some image quality is lost at high compression ratios, according to Patrick Brooks, product marketing manager for Micron's Memory Applications Group.

Compression takes a few seconds to a few minutes, depending on image size and complexity. "I compressed a 1.5-Mbyte color image in about four seconds," Brooks said, adding that ratios up to 30-to-1 are best for preserving image quality. "Decompression takes a little longer; in this case, it took five seconds."

Storm's PicturePress was developed by Adriaan Ligtenberg, a core member of the JPEG committee, a joint effort of two international standards-setting groups (see MacWEEK, April 10).

PicturePress, however, extends JPEG's compression algorithms, incorporating technology that selectively compresses part or discontiguous parts of an image.

Micron's product is expected to go up against a real-time system announced by C-Cube Microsystems Inc. of San Jose, Calif., which will be distributed through OEMs (see MacWEEK, Feb. 20).

Micron Technology Inc. is located at 2805 E. Columbia Road, Boise, Idaho 83706; (208) 368-4400. □

FullWrite Pro 1.5 to debut in Boston

By Henry Norr

Torrance, Calif. — It's not quite the high-performance Version 2.0 some FullWrite Professional users had hoped to see by now, but Ashton-Tate Corp.'s feature-rich and slow-selling word processor is finally getting its first major update.

Version 1.5, which will go on sale at this week's Macworld Expo, adds several significant new capabilities:

▸ **Click-and-drag sidebars.** Users can reposition and resize sidebars with the mouse instead of the dialog box previously required.

▸ **New import/export options.** A separate application that translates several Mac and MS-DOS file formats, including Microsoft Word 4.0, PageMaker (export only), MultiMate Advantage, WordPerfect (MS-DOS only), DisplayWrite and MacWrite, but not MacWrite II, will ship with Version 1.5.

▸ **Table tools.** Tycho Table Tools, Macreations Publishing Corp.'s table-making application, is now bundled with FullWrite.

▸ **Improved help and manuals.** The new version makes context-specific help available at the click of a mouse, and Ashton-Tate said the manuals have been rewritten.

The $395 program will be on sale at the expo for $99.95. Upgrades are $49.

Ashton-Tate Corp. is at 20101 Hamilton Ave., Torrance, Calif. 90502; (213) 329-8000. □

IV apps headed for Mac

Torrance, Calif. — Yearning to run dBASE IV applications on your Mac? Hope is in sight, or will be at Ashton-Tate Corp.'s booth at this week's Macworld Expo. The company will be showing dBASE IV Runtime Plus, a program that will let Mac users run applications developed with the original dBASE IV 1.0 and with Version 1.1, the long-awaited bug fix released last week.

The company declined to set a date for release of the character-based Mac program. □

Four months behind schedule, Quark is finally shipping XPress 3.0, which offers an improved interface, a pasteboard metaphor and rotation of text and graphics.

Quark delivers XPress 3.0

Denver — Quark Inc. didn't make the trek to Macworld Expo, but back home the company is shipping Version 3.0 of QuarkXPress.

A simpler interface, a pasteboard metaphor, an interactive Show Measurements palette, multiple-item selection, and rotation of text and graphics highlight the upgrade.

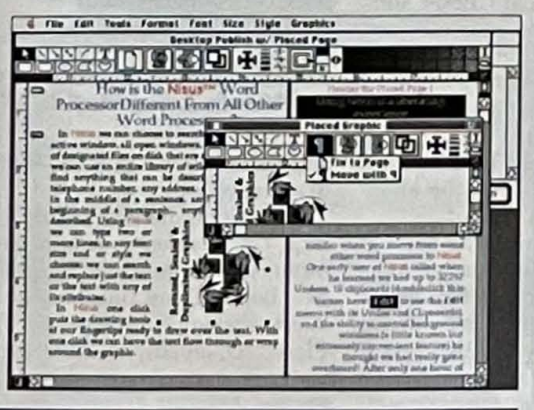
XPress costs $795; upgrades are $30 to users with warranties and $150 to non-warrantied owners.

Quark Inc. is at 300 S. Jackson, Suite 100, Denver, Colo. 80209; (303) 934-2211. □

Paragon Concepts to ship Nisus 3.0 word processor

Solana Beach, Calif. — Nisus 3.0, the latest version of Paragon Concepts Inc.'s $395 word processor, will ship this week with simplified menus, enhanced graphics and layout features, and a new BASIClike programming-language module used to create custom features.

Paragon Concepts Inc. is located at 990 Highland Drive, Suite 312, Solana Beach, Calif. 92075; (619) 481-1477.



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"Virex and [Virex INIT] are excellent performers." MacUser, 1/90

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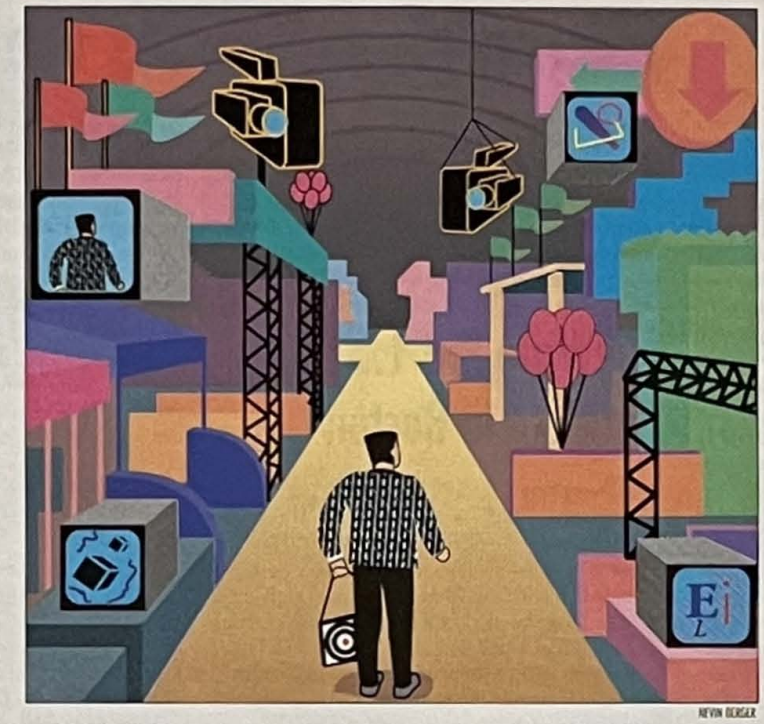
MacWEEK's show picks

Expo preview: Beating the bushes for Macworld's best

The Macworld thing. It's happening. This week. Boston. Very busy. Very hot. Exciting products. Read my disks. No new Macs. Networking. Printers. A thousand points of fonts. MacWEEK staff presents a 15-step guide to this week's Macworld Expo.



KEVIN BERGER

System 7.0

1 While developers hover by their mailboxes, waiting for the first general-release beta version of System 7.0, they're gnashing their teeth over the loose-lip restrictions that prevent them from publicly demonstrating any application with the new system software. Private demonstrations in suites, however, will be common. Apple's Chris Espinosa will give a public demonstration of the long-overdue system at a panel on Wednesday; don't be surprised if it pops up in one of the keynotes.

HyperCard

2 You won't see too many HyperCard team members at this week's expo. They're locked in the lab, putting finishing touches on their new baby, now officially overdue. While Apple has sanctioned developer demos of HyperCard 2.0 stacks at the show, they can't ship their new arrivals until Apple ships a final-enough-for-developers' version.

Some developers, especially small ones, have thrown up their hands in frustration at Apple's delays in shipping the product. "We've grown tired of waiting for Apple to get 2.0 out the door," said Michael Haas of Nine to Five Software after announcing Reports 2.0 last week.

At the show, stack heads will want to keep an eye on:

- Lotus Development, with the forthcoming Lotus Marketplace.
- The Voyager Company, with LaserStacks, AudioStack and VideoStack.
- Millennium Software, with HyperX 4.0 expert system.
- The ecological HyperPoster "Kids Can Save the Earth," organized by Amanda Goodenough. It will be shown at selected user-group booths.

Display

3 If Boston's air quality makes it difficult to check out the city's historic sights, there'll be plenty of visual refreshment on the show floor.

Bloodshot eyes making it tough to tell Red Sox from White Sox? SuperMac Technology's new SuperMatch color-matching system may help your color control. SuperMac says it will flawlessly match color from scanner to screen to printer.

Bakin' in Beantown

No, it won't be as hot as last year's Macworld/Boston, but rest assured, you'll sweat. Forecasters call for merely "normal" humidity and temperatures this time around. That means only moderately soggy, mid-80 degree air with a refreshing(?) 10-15 mph wind to cool your brow. And the air quality? The usual atmospheric miasma – keep the respirator handy.

For speed freaks, RasterOps will flash new large-screen and small-screen graphics boards that scream through redraws in eight- and 24-bit color. Radius will turbocharge QuickDraw with its GDirectColor/GX 32-bit accelerator for Apple's 13-inch color monitor.

Keep a sharp lookout for new monitors — they'll be scarce for a change. E-Machines will focus on its not-so-new 16-inch color line, which includes the T16 and TX models. With an eye toward VDT safety, Sigma Designs will show low-emission versions of its monochrome and gray-scale monitors, while NoRad will wield its Super-Shield radiation, glare and reflection shield for 19-inch monitors. NEC Technologies will plug in the MacSync HC, a high-contrast version of the MacSync monitor.

Graphics

4 It's been a long time since 88, but Adobe Illustrator 3.0 should draw a crowd with its new text and graphing capabilities. Those looking for a new approach to painting should search out Oasis from Time Arts and a new release of PixelPaint from SuperMac.

Preferred Publishing is breathing new life into old Cricket Software programs, reviving CricketPaint as MasterPaint and Cricket Color Paint as MasterColor. ColorMacCheese, a 24-bit paint program that made a splash at the last expo, is now distributed by Baseline Publishing. At $59.95 on the show floor, the cheese is cheap.

On the 3-D front, Pixar will run Showplace, a MacRenderMan-compatible program for creating pictures; Strata will demo Version 2.0 of StrataVision 3d; Spyglass will display its Dicer scientific-visualization program; and Paracomp will pull out Swivel 3D Professional.

If precision drafting and design, a.k.a. CAD, makes your heart beat faster, stop by Amiable Technologies' booth. There you can see the latest version of Amiable's $1,995 FlexiCAD, an easy-to-use drafting program optimized for Radius' QuickCAD and Artist Graphics' Artist XJS display-list accelerators. This also is the first chance to see the new Artist board at the Amiable booth. Fresh off the drafting table, Artist now speeds up pans, zooms and redraws of Autodesk's AutoCAD as well as Amiable's.

And while you're at it, plot a course for Claris' booth to see the face-lifted Claris CAD 2.0, due soon.

Type

5 A faster version of Adobe Type Manager will be ready to rasterize, and conversion programs like Altsys' Metamorphosis and Evolution from Image Club Graphics will transform your Type 3 fonts into Type 1. Watch out for rumored rumblings of PostScript-to-TrueType conversion programs.

Font collectors will want to look at Monotype Typography's elegant new faces, such as its jazzy Ellington. Font factory Adobe will hawk its stylish Adobe Type Guide, a complete compendium of its digital typefaces, for $20.

Printers and scanners

6 The already-hot low-cost PostScript printer market may boil over as major vendors fan the flames in an effort to smoke out the competition. Two attention grabbers: Apple's fast Personal LaserWriter NT and QMS' multiplatform PS-410, both on display for the first time. But don't forget to check out the devices on display at GCC Technologies and Qume, as well as two brand-new 6-page-per-minute offerings from NEC Technologies and Sharp Electronics.

If you didn't see it at the April show, cruise by Canon's booth to see its Color Laser Copier 500 and still-video camera interfaced with an Adobe PostScript RIP and Aldus PrePrint software. It's quite a system.

Finally, a hand-held scanner that makes good sense: Caere's spanking new Typist combines scanning and optical character recognition into one little sleek black device. Typist inhales text on the fly at 500 words per minute and spews it into any application.

Mac fans and DOS heads alike should stop by QMS' booth for a peek at its PS-410 with automatic emulation switching.

Time Arts' Oasis offers pressure-sensitive tools that let users simulate watercolors, charcoals and other media. The program will ship in October for between $700 and $800.

Just the facts, Mac

What: Biannual Mac orgy

When: Wed., Aug. 8-Sat., Aug. 11

Who: 50,000 devotees and 400 exhibitors, but not biggies Symantec, Letraset and Quark.

Where: Bayside Exposition Center, World Trade Center, Wang Center

Why: Why not?

Utilities

7 Inexpensive utilities are always big expo attractions, and this show promises to be no exception. This time the South is rising: Memphis, Tenn.-based newcomer Baseline Publishing will sell the color version of the Talking Moose for $25 and the other entries in its MacPAKS series for comparable bargains. Preferred Publishers, Baseline's Memphis neighbor, will make the scene with Personality!, a new Control Panel device that can take the Mac interface where it's never been before, and Double Talk, an innovative new telecommunications program.

From the midwest, CE Software will be showing QuicKeys 2, a forthcoming upgrade to its ubiquitous macro utility, as well as its recently shipped Alarming Events calendar and reminder program.

On Cue II, the much-enhanced version of another power users' favorite, is still in the queue, but this time you won't have to be a bigwig to get a look at it. Just head to the ICOM Simulations booth.

Finally, the Great Screen Saver War of 1990 will rage hot and heavy all over the expo. Berkeley Systems said its phones are "melting down" as users clamor for the goldfish from the company's AfterDark 2.0, shown in last week's MacWEEK, but Fifth Generation's Pyro! still has its champions. Ibis Software may make waves with Protector Shark, a screen saver and game that lets you go spearfishing for sharks. The company won't have a booth, so you might have to snorkel around the Bayside to locate a copy, but if you can, it might be just the thing. Where else can you get shark music for a start-up sound and a fin that mounts on your Mac?

Multimedia

8 It's a big Mac media attack, with Farallon's MediaTracks and Macro-Mind's MediaMaker up and running.

HyperPro will show VideoMaker to wannabe multimedia producers interested in interactive videodisc presentations.

Paracomp has acquired distribution rights to FilmMaker, a high-end French animation program that it will screen at its booth. Paracomp has said that it will deliver FilmMaker at the show; expect the ticket to cost less than a grand.

For a low-end animation program, check out ADDMotion from MotionWorks. The $295 HyperCard 2.0 extension supports full-motion color animation and will — HyperCard 2.0 willing — ship this month.

Networking

9 The networking never stops. Mingle with Oracle for the story on up-and-coming Oracle Server for Macintosh, a real live client/server SQL relational database that you can put on a Mac-only network. But we've only seen it running on a slide projector so far.

Liaison, the software-only everything-to-everything router by Infosphere-cum-Farallon, makes its first connection at Farallon's booth.

If you wander by Novell's booth for a gander at its improved but less-than-perfect NetWare for Macintosh VAP, pester Novell about the NetWare 386 for Macintosh NLM.

The lucky few with invites should take advantage of International Business Software's exclusive preview of DataClub in the Presidential Suite of the Ritz-Carlton.

Video

11 There'll be plenty of video-in and video-out boards to tune into.

SuperMac will show two boards, one tailored for transferring digital video across the NuBus in real time and one for still-image compression.

Truevision's NuVista+ video board sports multiple input and output capabilities. While video effects have been expanded, the price hasn't.

Intelligent Resources will exhibit a 32-bit video input and output single-slot board. Called the Video Explorer, it is expected to compete against high-end video-production systems.

Radius gets real-time video in with RadiusTV, while Advent, with its Neotech Color Video Encoder, will print Mac images to tape. Mass Microsystems will unveil its under-$800 EasyVideo 8 video-in board.

For a desktop video-production system, drop by Digital F/X and check out its $9,995 Video F/X system. And Interactive Media Technologies' IMTX 8000 video integrator, a crowd pleaser at the last expo, is back for an encore.

Communications

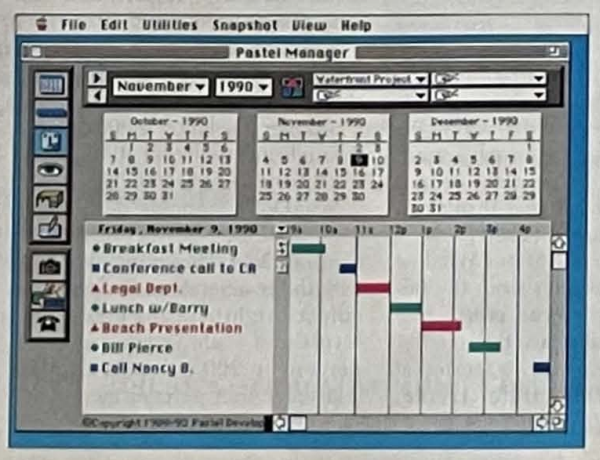
12 For a good telecom deal, check out this offer from Software Ventures (sharing the Washington Apple Pi booth): Users of any telecom software can upgrade to its $295 MicroPhone II 3.0 for $95.

The AppleFax Modem may be dead, but the third parties that helped shoot it down will be out in force. Look for new fax/data offerings from Dove Computer, Prometheus Products and Global Village Communications, among others.

Productivity

10 Developers, who make a living meddling in other peoples' work lives, are determined not only to make Mac users more productive but to tell them *how* to work.

Taking the "there can never be too many cooks" approach, Group Technologies will show Aspects 1.0, which lets up to 16 users collaborate simultaneously on a document. For professionals up to their monitors in paper, Pastel Manager from Pastel Development offers handy electronic storage. ithink, a "visual thinking tool" from High Performance Systems, functions as a kind of inverse spreadsheet, letting users map out relationships between data.



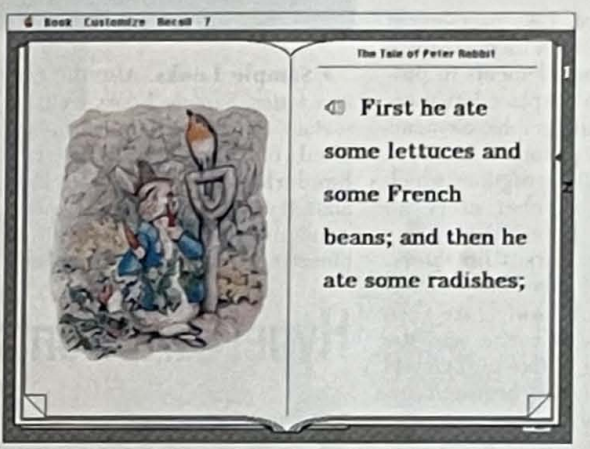
Information overload is a Mac-world phenomenon. For professionals constantly struggling with a deluge of data, Pastel Development will be showing Pastel Manager, a $295 personal information manager that can display information in a variety of forms.

CD-ROM

13 Mac fans who have grown into thirtysomething parents will want to find Discis Knowledge Research. It will show Discis Books, CD-ROM-based children's books that help teach reading skills. It may be just the excuse you need to get a CD-ROM drive for home. While you're at it, The HyperGlot Software Co. will gladly sell you Learn to Speak French for your own edification.

Speaking of drives, if you're still waiting for your back-ordered Apple CD-ROM drive, you may want to search out the new third-party drives on the show floor: PLI's CD-ROM drive and the Metro CD from EMAC (a division of Everex). CD Technology has upgraded its hardware and software, for improved compatibility and audio capabilities.

If you can't find your favorite CD-ROM title or drive company in its own booth, the Bureau of Electronic Publishing will repeat the "CD-ROM megabooth" tradition it started at the San Francisco expo last April.


Book Customize Recall 7
The Tale of Peter Rabbit
First he ate some lettuces and some French beans; and then he ate some radishes;

Discis Books, new from Discis Knowledge Research, make children's stories, such as "Peter Rabbit" by Beatrix Potter, more involving and interactive, in the hopes of stimulating reading among young children.

Storage

14 If storage is your bag, expect bigger, faster and cheaper — at least by the megabyte, if not in terms of the final impact on your budget. There will be action in the optical market, with Iomega and SuperMac showing drives that promise performance missing from the current crop of magneto-opticals. MicroNet Technology will take on Storage Dimensions' Tahiti with a Canon device that leaves old standards behind in the interest of speed. Pinnacle Micro, which showed the Mac world's first 3.5-inch 128-Mbyte optical in April, will bring it back, while Ocean Microsystems, which promised a similar mini magneto last spring but didn't show it, says this time it's for real.

On the backup front, DAT's da word, as vendors add digital audio tape devices to their lineups. Mac managers tired of hauling backup devices around should look at Retrospect Remote, Dantz Development's network-backup software. Golden Triangle won't have its own booth, but look for its DiskTwin duplexing system at the booths of PLI, Procom and CMS Enhancements, all of which may co-market the Twin card.

PLI will also show the Mach I, a series of devices that offer up to 100 Mbytes of non-volatile memory and access times of 1 millisecond.

Server shoppers should check out Racet's Mac-in-a-Box, a floor-mounted cabinet with a Mac IIx motherboard; an "industrial-grade" power supply; and room for up to six Winchester, tape or optical drives.

Finally, if your SE or three-slot Mac's internal drive is bursting at the seams, you might wander by the MicroNet booth to see a new Seagate 3.5, designed by the old Imprimis team, that holds 400 Mbytes and is said to go head-to-head in performance with 5.25-inch drives.

Odds & ends

15 If you're looking for an alternative to the Mac Portable, check out the Ultimate Portable from Computer Friends. The $599 package includes an Atari Portfolio; a 1-pound IBM PC-compatible computer that includes a word processor, spreadsheet, calculator and telephone directory; and the software and cable needed to move the data from the Portfolio to the Mac. A $149 micro modem also is available.

For voice messaging, the expo will offer the slimmed-down version of Farallon's MacRecorder and Articulate Systems' challenger, the Voice Link. Articulate may also turn a few ears with the Voice Navigator II, a new, $595 implementation of its speech-recognition system that should be for sale on the floor.

Serious and non-serious programmers should loop through the Serius booth for a glimpse of new objects for Serius Developer and Serius Programmer, icon-based program-development tools. The company will demonstrate the new Spreadsheet and the Word Publisher objects.

Pixar rounds out 3-D offerings

Composition app, sample libraries

By Connie Guglielmo

Richmond, Calif. — Less than a month after shipping MacRenderMan, its first Macintosh product, Pixar announced what it calls a "3-D picture-composition" program for the Mac as well as two new libraries of 3-D clip art:

▸ **Showplace.** Like page-layout programs, which let users combine text and graphic elements to produce a page, Showplace lets users combine text and graphic elements to create a 3-D picture.

With the $795 program, which will ship in November, users can import objects from 3-D modeling applications or from ClipObjects Sampler, Pixar's new library of 3-D shapes. Objects, which are then arranged into a scene, can be enhanced using surface textures and light sources. Text can be placed anywhere in a scene.

The user can then determine the camera angle for viewing the scene and preview it in full color. Pictures are saved in TIFF and PICT formats.

For photo-realistic 3-D images, Showplace images can be exported and rendered in MacRenderMan.

Showplace requires a color-capable Mac IIcx, IIci or IIfx with a hard disk and 5 Mbytes of RAM.

▸ **ClipObjects Sampler.** The first in a series of 3-D clip art libraries, ClipObjects Sampler can be used with Showplace and any RenderMan-compatible application. The 3-D objects, including basic shapes such as pyramids, cylinders, cubes, cups and furniture, can be modified or enhanced using surfaces from Pixar Looks Libraries.

A month after shipping MacRenderMan, Pixar announced Showplace, a $795 3-D picture-composition program, along with two new libraries of 3-D clip art.

▸ **Sample Looks.** Also the first in a series, Sample Looks contains surface attributes that can be applied to objects created with RenderMan-compatible applications. It contains gravel, paint, metal, wood and stucco surfaces. Future libraries will include Stone Looks, Wood Looks and Dingbat Looks.

Pricing for ClipObjects Sampler and Sample Looks has not yet been determined. Both packages are slated to ship in the fourth quarter.

Pixar is located at 1001 W. Cutting, Richmond, Calif. 94804; (415) 236-4000. □

HyperCard fronts mainframe mail

By Raines Cohen

Half Moon Bay, Calif. — Two recently announced HyperCard-based products soon will give network managers some new tools for group coordination and messaging.

▸ Concentrix Technology Inc. next month will begin shipping Connections, a $495 collection of stacks designed for personal calendaring, group scheduling, and electronic mail on host-based or local networks or on individual machines. One of the modules, Connections:PROFS, integrates locally stored information with a graphical front end to IBM PROFS systems.

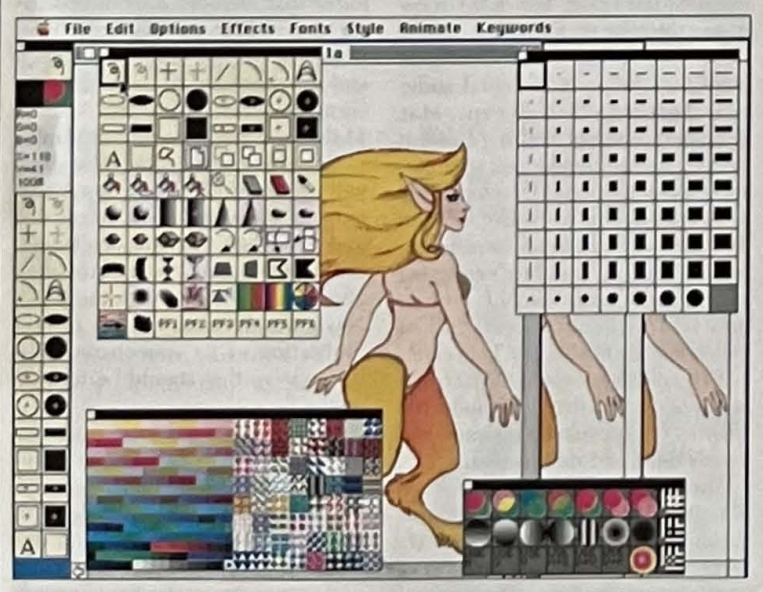
Concentrix, which is headed by HyperCard guru Danny Goodman, also is shipping California Navigator, a Connections-based application for "knowledge workers" at California state agencies.

▸ Mitem Corp. will premiere MitemMail, a series of HyperCard 2.0-based products designed to act as a front end for E-mail systems, at this week's expo. The first product in the series will work with IBM's PROFS Notes mail software. The company said users can modify the stack, using its MitemView software, to work with other popular mail systems, including Digital Equipment Corp.'s ALL-IN-1 and VMS Mail. MitemMail is due in the fourth quarter for $250, with volume discounts and site licensing available.

Concentrix Technology Inc. is at 7 Ashdown Place, Half Moon Bay, Calif. 94019; (415) 726-1700.

Mitem Corp. is located at 2105 Hamilton Ave., Suite 190, San Jose, Calif. 95125; (408) 559-8801. □

Linker's Animation Stand becomes faster, smoother



Version 1.2 of The Animation Stand, Linker Systems' high-end animation program, lets users choose from among 80 tools to create custom toolboxes that can be saved separately or with an animation.

Irvine, Calif. — Putting a new spin on its professional-level animation program, Linker Systems Inc. has announced The Animation Stand 1.2. The new, faster version of the $7,495 program (see MacWEEK, Jan. 23) will ship this month and supports System 7.0, along with:

▸ Precise anti-aliasing and motion control, which eliminates jaggies and provides for smooth animations.

▸ The capability to list animations in the exposure sheet, a spreadsheet that logs each frame, top to bottom, left to right or in a stacked art format that displays a scaled-down image of each frame.

▸ A customizable Status Window that displays 26 tools from the 80-tool palette. Users can create custom toolboxes and save them.

Linker Systems Inc. is located at 13612 Onkayha Circle, Irvine, Calif. 92720; (714) 552-1904. □

Spyglass Dicer cuts scientific data down to size with color 3-D imaging

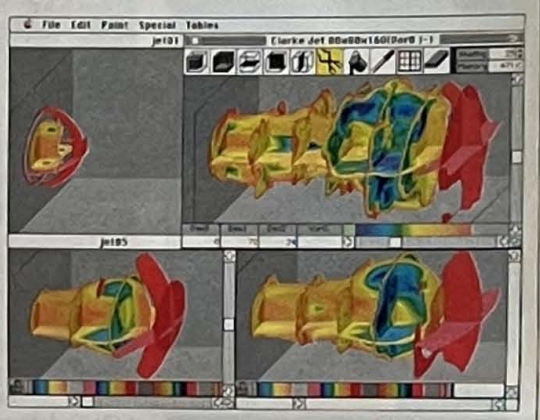
By Connie Guglielmo

Champaign, Ill. — Spyglass Dicer, a program for visualizing 3-D data in color, is available now from Spyglass Inc.

The $495 program, designed as a data-visualization tool for scientists and researchers, displays data in a cube that can be freely repositioned. Portions of the cube may be sliced away; users also can display horizontal, vertical or parallel slices. In addition, the color table can be customized, color shading of the surfaces controlled and selected colors made transparent.

Spyglass also announced that Spyglass Format, a $195 program for creating presentations and animations, will ship Sept. 1. The shipment of Spyglass Format rounds out the company's line of announced visualization applications. The company's 2-D data-visualization applications, Spyglass Transform and Spyglass View, shipped in April (see MacWEEK, Feb. 27 and May 15). All the Spyglass applications can import Hierarchical Data Format data, among other formats.

Spyglass Inc. is at 701 Devonshire Drive, Suite C17, Champaign, Ill. 61820; (217) 355-1665. □



Spyglass Dicer can render and transform scientific or business data in three dimensions. Shown above is a supersonic gas jet simulation developed at the University of Illinois in Urbana.

Epson ships color scanner bundled with Letraset suite

By Pamela Pfiffner

Torrance, Calif. — Taking aim at a neighbor and competitor, Epson America Inc. last month shipped its first color scanner for the Mac.

The Epson ES-300C, priced at $2,590 in its Mac configuration and bundled with Letraset's ColorStudio and ImageStudio, will challenge Microtek Lab Inc.'s color and gray-scale $2,695 MSF-300ZS.

While the Microtek scanner and most other color scanners require separate passes for each color, the Epson unit captures color data at 24 bits per pixel in one pass. Using proprietary technology called TruePass, the ES-300C has separate red, green and blue light bars that alternate as each line is scanned. Epson said TruePass results in better registration and faster image processing.

When scanning color images for monochrome output, users can choose to drop out selected colors.

Scanner resolution is 300 dpi, but through interpolation it simulates resolutions of 50 to 600 dpi.

ScanDo, a scanning desk accessory developed by Hammerlab Corp. of New Haven, Conn., ships with the scanner. ScanDo lets users adjust brightness through seven levels and scale images from 50 percent to 200 percent. Zoom is adjustable in 1 percent increments from 50 percent to 200 percent with horizontal and vertical zooms set independently.

Color and gamma correction is preset to match output devices and monitors. Color correction is automatic via hardware and applied on the fly during scanning. Gamma correction also may be tailored for each image. Three halftone patterns are available.

The scan area is 8.5 by 11.5 inches. Images can be saved as PICT, TIFF, Encapsulated PostScript or MacPaint files.

ImageStudio and ColorStudio, the two Letraset image-editing packages bundled with the ES-300C, have retail prices of $495 and $1,995, respectively. Both also are bundled with Microtek's MSF-300ZS.

For limited use as a color copier, the ES-300C also may be connected directly to any Epson color dot-matrix printer as well as Hewlett-Packard Co.'s PaintJet.

With standard parallel and RS-232C interfaces, the base price of the ES-300C is $1,995. The SCSI interface for the Mac is $595. The unit ships with a one-year warranty. The scanner is available from any of Epson's 3,000 dealers. La Cie Ltd. of Tuluatin, Ore., markets a $1,995 scanner based on the same mechanism used in Epson's ES-300C.

Epson America Inc. is located at 23530 Hawthorne Blvd., Torrance, Calif. 90505; (213) 539-9140. □

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Some think there's no a
Microsoft applications. T
the same thing abo

Nobell Chem Revenue Potential

Product Portfolio Breakout

High Growth Markets	1989	1990	1991	1992
Medical Applications	15	25	40	60
Industrial Applications	30	39	46	51
Total	*45*	*64*	*86*	*111*
% of total	*55%*	*63%*	*68%*	*72%*
Mature Markets				
Defense Applications	36	38	40	42
% of total	*45%*	*37%*	*32%*	*28%*
Total Revenue	*81*	*102*	*126*	*15*

Nobell Chem

Report to the Board of Trustees

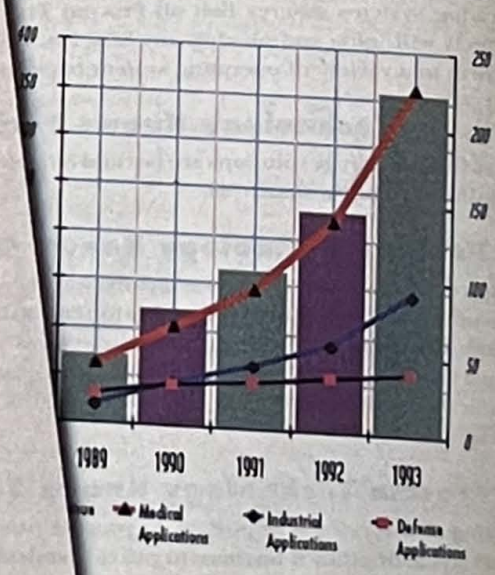
During the past twelve months, the Nobell Chem Corporation pulled far ahead of the competition, through the diverse and strategic marketing of its Nitro Glycerin compound.

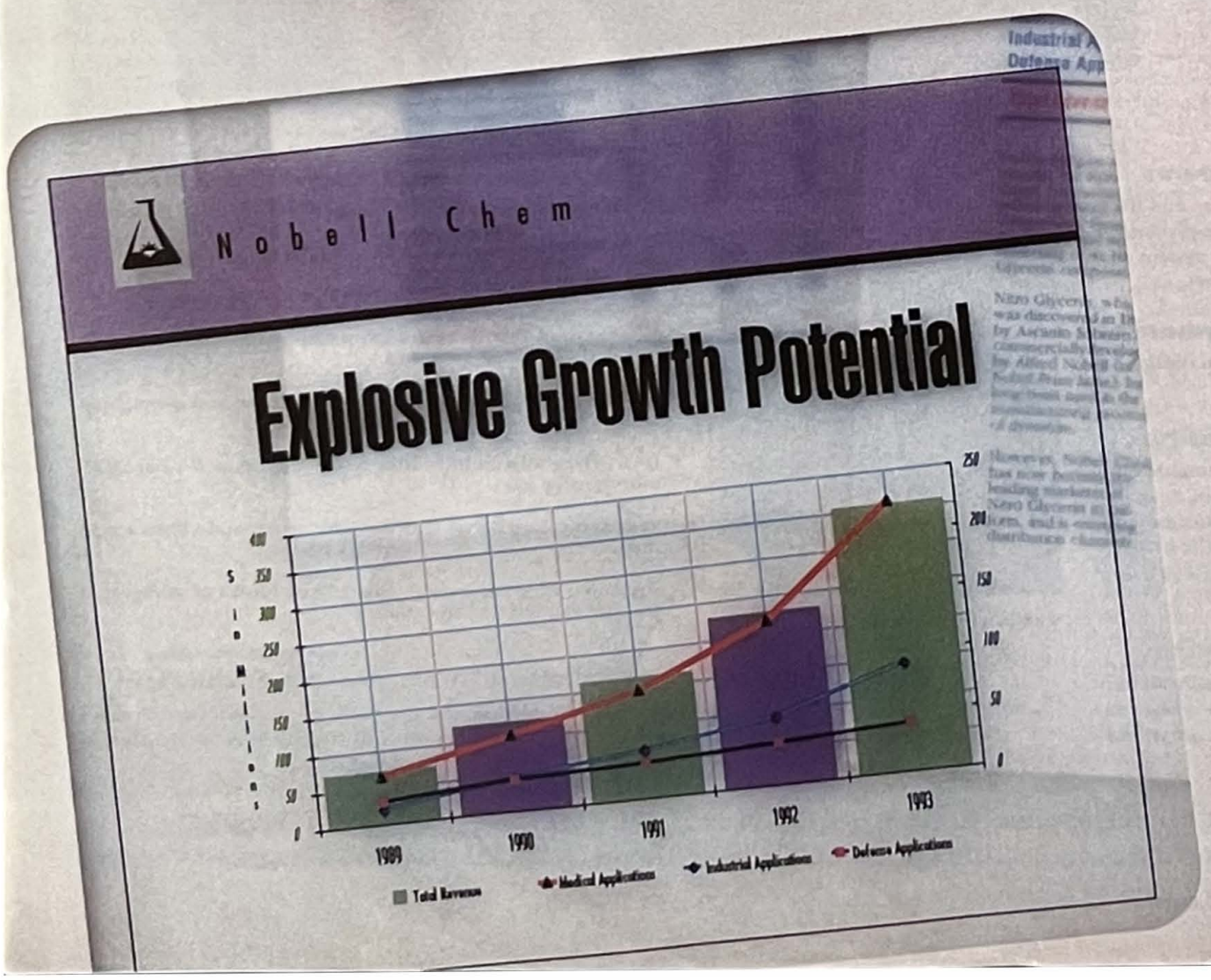
Nitro Gly…ich was discovered in 1847 by Ascanio Sobrero and commercially developed by …d Prize fame), has long been used in the manufacturing process of dynamite.

…now become a leading marketer of Nitro Glycerin in pill form, to aid …l uses. As a result of this development, Nobell Chem is now expanding …istribution channels.

1989	1990	1991	1992	1993
15	25	40	60	85
30	39	46	51	72
36	38	40	42	44
81	*102*	*126*	*153*	*201*

Explosive Growth Potential





dvantage to combining hen again, some thought ut nitro and glycerin.

If you own a Mac® you may already know what a phenomenally powerful piece of software Microsoft® Word is.

And, most likely, you're also aware of how powerful Microsoft Excel is. Well here's something you probably don't know:

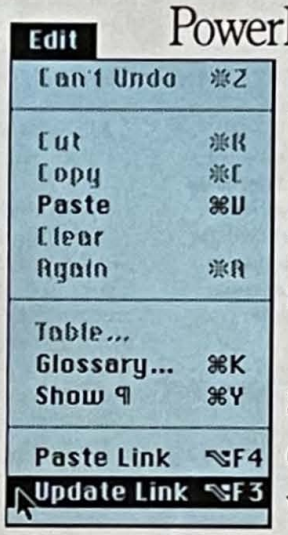
When Word and Microsoft Excel are combined, they're even *more* powerful. In fact, they're nothing short of explosive. Pun intended.

Because together Word and Microsoft Excel allow you to exploit the Macintosh®'s operating system in a way that has never been possible before.

We call this unprecedented feature "warm links." But you'll be more inclined to call it the best thing for revising documents since white out.

Here's how warm links works. Imagine it's the end of the day and tomorrow's the BIG presentation. You've been working with the sales manager to incorporate his Microsoft Excel projections into your report. You're finally done. But wait. Suddenly he makes one of his famous last-minute changes to the spreadsheet.

This is where warm links saves the day (or the hour). No more antiquated manual moves of opening and closing your document, cutting, pasting and praying. With warm links, you simply open your Word document and select Update Link. Word automatically finds the latest Excel data and updates your report. It's as simple as it sounds.



After you update your data in Microsoft Excel, select "update link" from Word's edit menu, and the change will automatically appear elsewhere.

Of course, because we are talking about the BIG presentation here, you'll want to go the extra step and blow them away. Enter Microsoft PowerPoint®. It's the easiest way to create attention-getting overheads and slides in black and white or color. Just cut and paste data from Word or Microsoft Excel into your presentation, draw, color, shadow, and take a bow.

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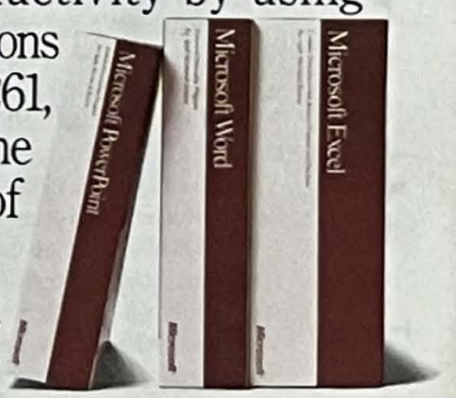

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TFLX linked to videophones, MS Mail

By Carolyn Said

Chatsworth, Calif. — Just like the Jetsons, Mac users can have access to videophones at their finger tips. With TFLXvm from Magnum Software Corp., Macs can send and receive voice mail and video "snapshots" to and from other TFLX systems or any videophone.

TFLXvm, available now at $495, is a new "personal edition" of Magnum's $2,995 TFLX system, which has been on the market for 18 months.

While TFLXvm's videophone capabilities may be out of most users' stratospheres, Magnum plans to add a more down-to-earth feature this month: the capability to "read" Microsoft Mail messages, in a computer-generated voice, when the recipient calls in by phone. The integrated system will be demonstrated in Microsoft's booth at Macworld Expo this week.

TFLXvm's hardware, a box that goes between the Mac and a single-line phone, digitizes sound and handles telephone chores such as recognizing Touch-Tone signals. The software deals with voice-mail and messaging tasks, such as broadcasting outgoing messages and recording incoming ones.

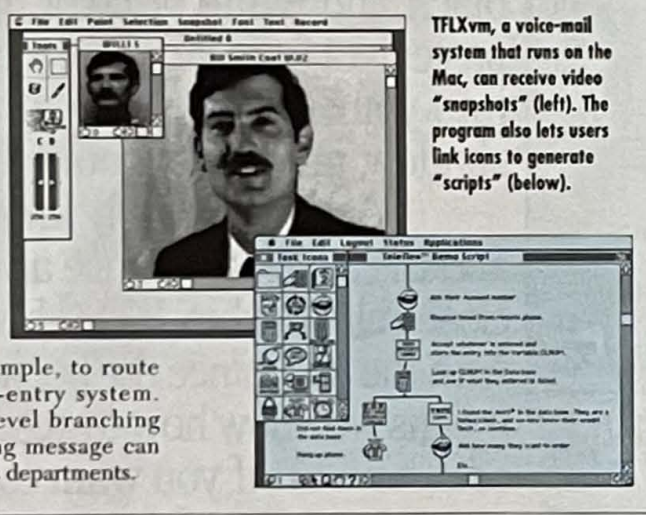
Magnum's proprietary Picture Programming software, an iconic programming language, lets users customize the software. By linking icons in a flowchart pattern and filling in information in dialog boxes, users can create voice-mail scripts, for example, to route callers through an order-entry system. TFLXvm provides multilevel branching capabilities so the outgoing message can direct callers through various departments.

A feature called PAX (picture and audio express) lets the system take, store, merge, edit, add text to, send or receive still pictures. (Unlike the Jetsons' model, current phone lines cannot transmit real-time video images.)

Magnum's customers have used the system for applications as diverse as tech support, market research, doctor referral services, 976 numbers and a dating service, according to Scott McTyre, vice president of development.

Bob Woehrle, president of Hotline Communications Inc. of Louisville, Ky., used TFLX to develop interactive telephone applications, primarily for real estate agents. "We'd be spending a lot more money to do all the things TFLX can do if we used an IBM PC system, even counting the cost of the Mac and hard drive," Woehrle said. "All the things it can do are mind-boggling. It's incredibly easy to use because the [picture programming language] is so self-explanatory."

Magnum Software Corp. is located at 21115 Devonshire St., Suite 337, Chatsworth, Calif. 91311; (818) 700-0510. □



TFLXvm, a voice-mail system that runs on the Mac, can receive video "snapshots" (left). The program also lets users link icons to generate "scripts" (below).

Articulate making itself heard with Voice Link, new Navigator

By Henry Norr

Cambridge, Mass. — The Articulate Systems Inc. booth, graced by a giant image of an ear, has been a fixture at recent Macworld expos, but this week the company will arrive with three new voice-based products that could put it into the Mac mainstream for the first time.

On display at the booth will be the Voice Link, a brand-new voice digitizer; the Voice Navigator II, a new, lower-cost complement to the company's flagship voice-recognition system; and second-generation software that promises to make it easier for users of both the Voice Navigator and its new sibling to train the devices and use them to control their Macs.

▸ **Voice Link.** The company will release Voice Link, an external device that digitizes speech for messaging and annotation.

Priced at $269, the new product will be the first major challenge to Farallon Computing Inc.'s MacRecorder, which is now available in $149 and $249 packages.

The Voice Link promises high-speed processing and "exceptional audio fidelity," thanks to its Texas Instruments digital signal processor (DSP), an on-board RAM buffer, a filtering scheme designed specifically for voice and embedded compression routines that follow Apple's MACE (Macintosh Audio Compression Expansion) specification.

Unlike the MacRecorder, the Voice Link is an "interrupt-driven, externally clocked asynchronous device" that requires virtually no system overhead, according to Articulate Systems. In lay terms, that means Voice Link users can record messages directly to disk while continuing to work on their Macintoshes; the Farallon product, in contrast, takes over the Mac CPU as it digitizes and compresses sound.

▸ **The Voice Navigator II.** Priced at $595, the Voice Navigator II is a scaled-down version of Articulate Systems' original voice-recognition product, introduced last year in $1,295 and $1,795 versions.

See Voice, Page 18

Voice recognition not 'dead-end,' users say

Jean-Louis Gassée, outgoing president of Apple Products, has publicly expressed doubts about voice recognition at present levels of technology, and columnist John C. Dvorak dismissed voice recognition as "one of my favorites among dead-end technologies" in this month's MacUser.

But the naysayers may be wrong, at least according to several early adopters of Articulate Systems Inc.'s Voice Navigator.

▸ Michael Coleman, coordinator of technical R&D for management information systems at Aluminum Company of America in Pittsburgh, said: "This is not some fancy technology no one can really use. Version 1.0 of [Articulate Systems'] software was a little clumsy, and I put the Voice Navigator on the shelf. But the new version makes it very, very useful right now. I've got it hooked into Microsoft Mail so I can address messages by voice." In the future, Coleman said, "I think we'll see executive information systems that let people just say, 'OK, I want Report 12.' "

▸ Jim Solenberg, scientific systems analyst at Eli Lilly Co. in Indianapolis, said, "I did a demo for our electronic microscopy and technology development groups, and they each immediately ordered a Voice Navigator." Lilly scientists plan to use it for hands-free recording of observations from their microscopes, he said.

▸ Forrest Jerome, director of product development systems at the Colgate-Palmolive Technology Center in Piscataway, N.J., where 400 Macs are installed and new ones are arriving at a 9-to-1 ratio over IBM PCs, said, "The Voice Navigator won't be on every desk or lab bench, but I foresee it playing a significant role." In addition to possible applications in clinical studies — so researchers could, for example, record observations from subjects' mouths — the company is considering incorporating it into a new laboratory information management system now on the drawing boards.

▸ Chip Shepherd, an engineer at Lockheed Engineering & Sciences Co. in Houston, said his group is using the Voice Navigator, along with HyperCard, to prototype a voice-input system for an advanced "extra-vehicular mobility unit," or spacesuit. "We're not going to launch one of these Navigators up there," he said, "but it's enabling us to come up with a system we're pretty sure will work." — *By Henry Norr*

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If you're searching for a MAC-friendly, storage-archiving backup solution, make a date with RACET's COSMOS 600™ optical drive – that keeps on working even in the most difficult operating environments.

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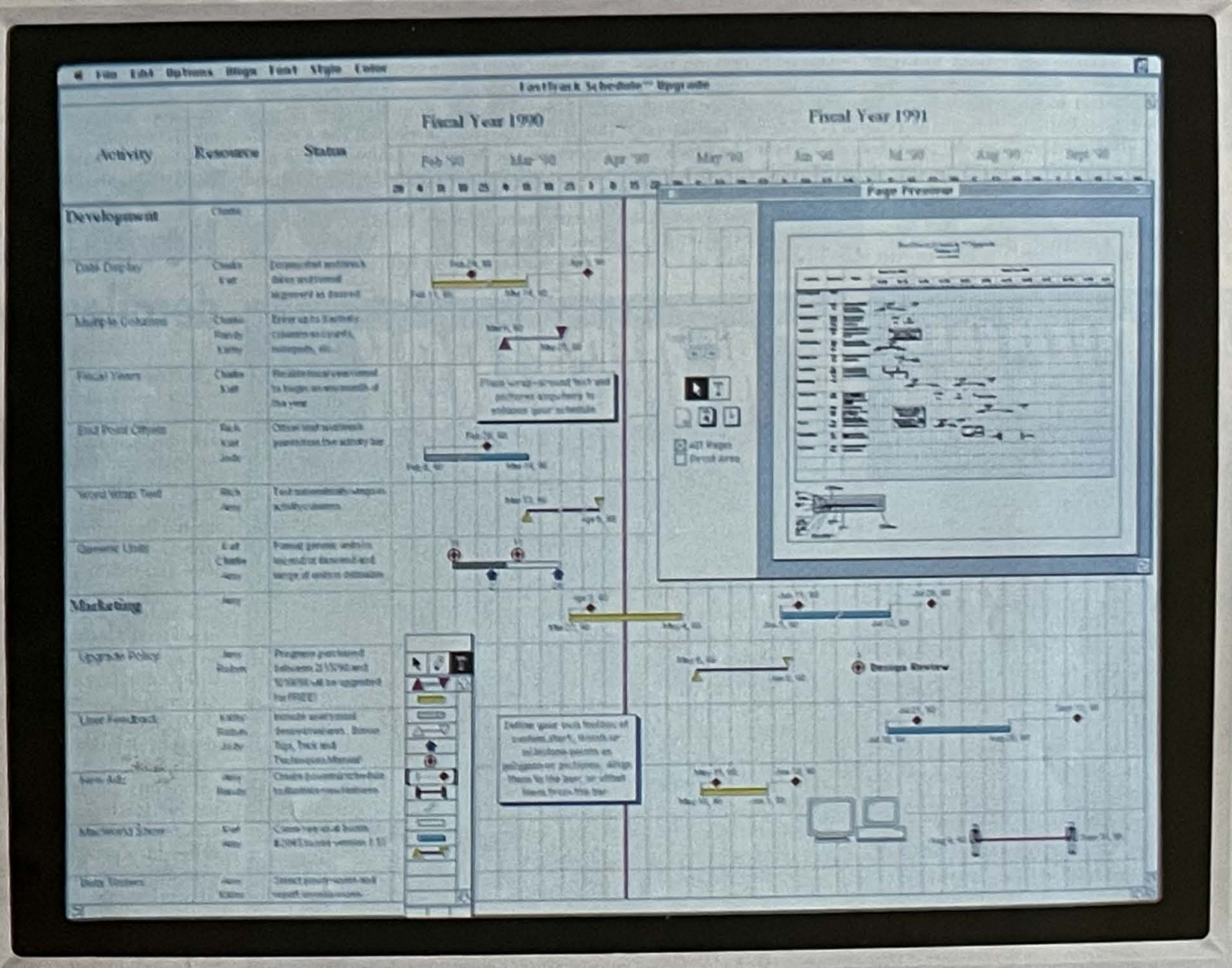

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FastTrack Schedule™ has always allowed you to create and update Gantt Chart Schedules quickly and easily! Just draw activities right on screen, customize your bar types and add labels, graphics, text blocks and multi-level sub-activities. When you need to make changes to your schedule, updating is a SNAP! By selecting effected bars or milestones you make an automatic link between tasks; then simply drag the items to their appropriate start date.

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But the really big news is that with version 1.5 you can also:

- View Schedules in flexible fiscal year formats.
- Display start and finish dates and align them to bars however you like.
- Add multiple activity columns.
- Offset points to appear above, below, on top of, or next to bars.
- Customize generic unit schedules.
- Choose day that week ends on.
- Word-Wrap text in activity columns.
- Type in dates to create and update bars.
- And more for only $235!

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MacUser, October 1989.

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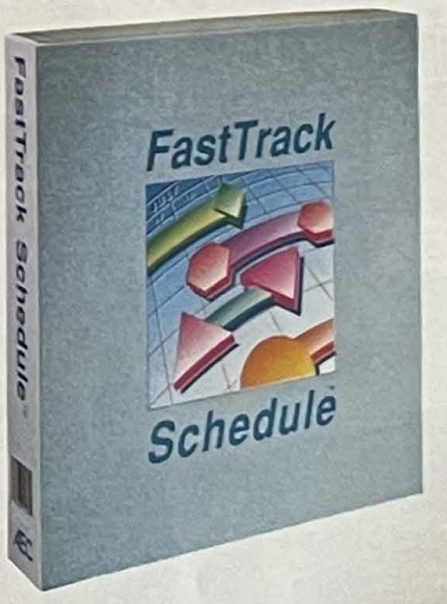

AEC MANAGEMENT SYSTEMS, INC.

Another quality project-oriented productivity tool from AEC Management Systems, Inc.

Voice

From Page 16

Like the original, the Voice Navigator II lets users control their Macs by voice, delivering spoken commands that select menu items or tools, click on buttons, launch macros or even enter data. The devices, which incorporate some technology licensed from Dragon Systems Inc. of Newton, Mass., can recognize any voice in any language and accent; users train the system to recognize their own voices for each command.

With the same DSP and embedded MACE compression techniques as the Voice Link, the Voice Navigator II also can function as a sound digitizer, according to Articulate Systems. Like the original Voice Navigator, it is an external SCSI device, but the new model measures only 5.5 by 6.3 by 1 inch.

According to the company, all that is missing from the new model, compared with the original, are two hardware capabilities that were available for developers but not supported by Articulate Systems' own user software: a telephone interface and audio output. While the Voice Navigator can be upgraded for $700 to function as a fax/data modem, the Voice Navigator II cannot.

▶ **New software.** Both the Voice Navigator II and the older model will run a rewritten version of Articulate's software. The new release, according to both the company and beta testers (see related story, Page 16), is more robust, more accurate, faster and easier to use.

The software is now fully compatible with MultiFinder and can hold command sets for up to seven applications in memory, automatically switching when the user changes applications. Other new features include on-line help, kanji support, and on-the-fly training and editing.

Articulate Systems Inc. is at 99 Erie St., Cambridge, Mass. 02139; (617) 876-5236. □

INTRODUCING NEW DISKLOCK

Unbreakable password protection for the Macintosh

It's sad but true. All it takes is a few minutes with your back turned, and an intruder could walk away with your most confidential data. *And you'd never even know it!*

Unsurpassed Password Protection
Now the leader in hard disk security announces the ultimate data protection system for your Macintosh. **DiskLock** works with any SCSI hard disk to provide foolproof password protection for individual files, folders, or your entire hard disk. You can even protect *all three levels* with different passwords for absolute maximum security. **DiskLock** automatically locks your files when you shut down or leave your Mac unattended, and alerts you to any unauthorized access attempts.

Sophisticated Data Encryption
State-of-the-art data encryption adds yet another layer of security. Without the proper password, your confidential files appear to contain nothing but gobbledygook!

Multiple Security Levels.
DiskLock lets you give each user password access to *just the files you choose* (word processing files for your secretary, accounting files for your bookkeeper, etc.). The *master* password gives you access to all files and folders.

Virus Protection, too!
If **DiskLock's** automatic virus checker detects an infection when you log in to a file, it notifies you and stops running immediately.

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Novell LANalyzer decodes AppleTalk

By Margie Wylie

San Jose, Calif. — Novell Inc. last week unveiled improvements to LANalyzer, its network-analysis program, designed to bring sophisticated diagnostic tools to the less-than-expert network administrator.

Network analyzers let administrators examine the flow of traffic on a LAN to determine how to distribute network load and to diagnose and troubleshoot problems. LANalyzer works with token-ring and Ethernet networks.

Scheduled for release late this month, the new version includes application test suites, an improved user interface, support for multiple concurrent channels and alarms. Although the software still runs only on an IBM PC AT-type machine, the new version also provides expanded AppleTalk support.

▶ Application test suites consist of 40 preset scripts (including several AppleTalk-specific routines) that run tests experienced administrators might design themselves. The suites also provide on-line help to guide administrators in interpreting test results. Network managers can modify existing suites or create their own test suites.

▶ The program now will decode all seven layers of AppleTalk Phase I and II protocols.

▶ An improved user interface features a text-based menu system and on-line, context-sensitive help.

▶ Multiple concurrent channels let administrators display up to nine different types of traffic simultaneously.

▶ Audible, logged or executable alarms can be triggered by error, event or time.

The new LANalyzer will cost $9,980 for an IBM PC AT-style board and software. Bundled with an NEC portable, it will cost $19,950. Registered LANalyzer owners still under the one-year warranty will receive the update free. Those not under warranty may purchase it at a discount.

Novell Inc.'s LANalyzer Products Division is located at 2180 Fortune Drive, San Jose, Calif. 95131; (408) 434-2300. □

Mass Micro doubles disks

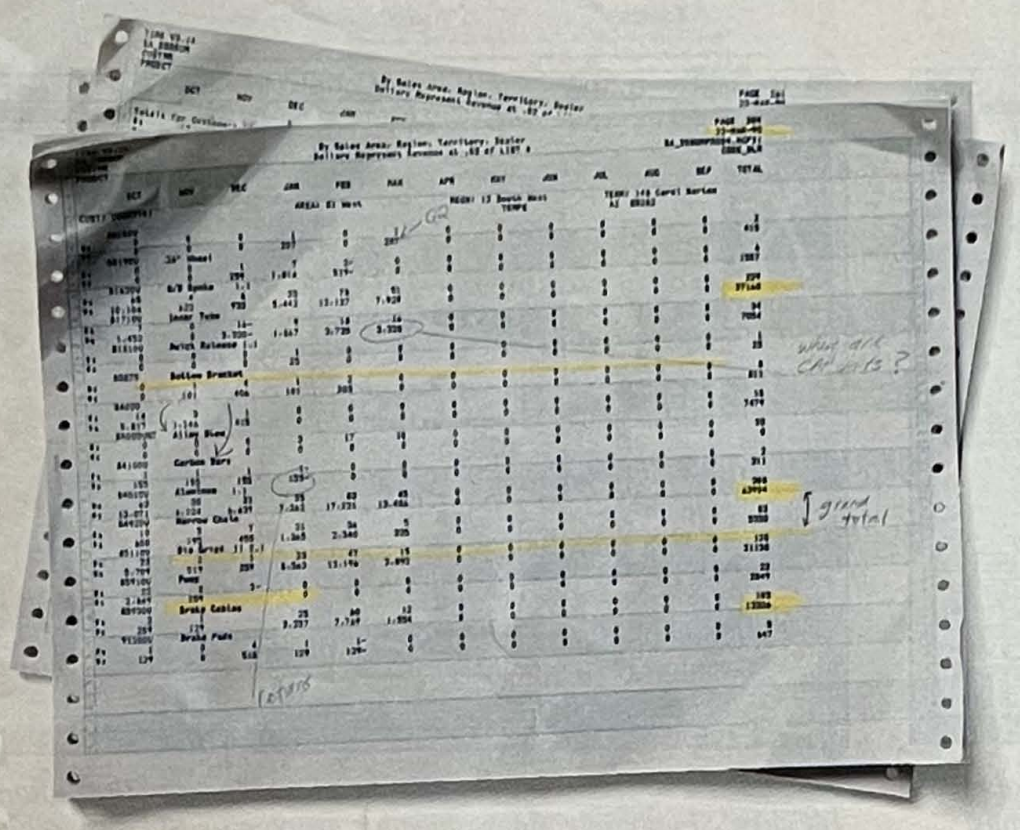
Sunnyvale, Calif. — Mass Microsystems Inc. last month announced plans to bundle DiskDoubler, Salient Software Inc.'s compression utility, with its DataPak family of SyQuest removable-cartridge drives.

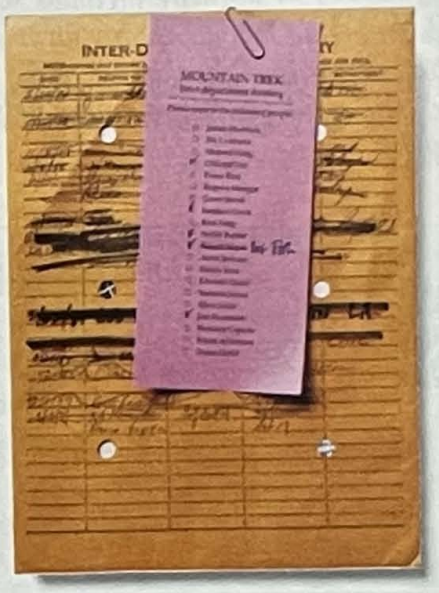
The $79 utility, first released in March, lets users compress or expand files from a menu added to the Finder without opening a special application; it also supports transparent decompression of compressed files from the standard Open dialog boxes (see story, Page 22).

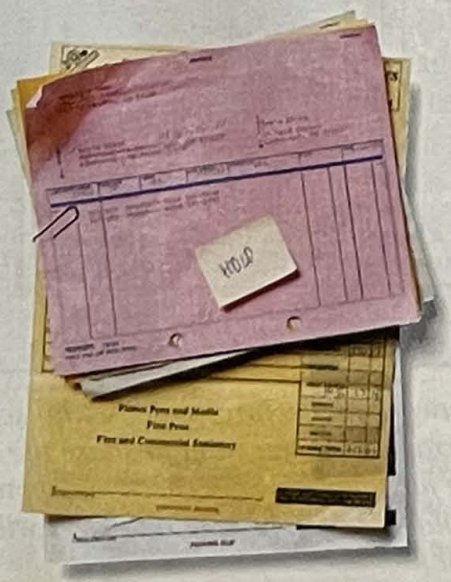
Under a two-year agreement between the two companies, Mass Microsystems will have exclusive rights to distribute DiskDoubler with removable-storage drives.

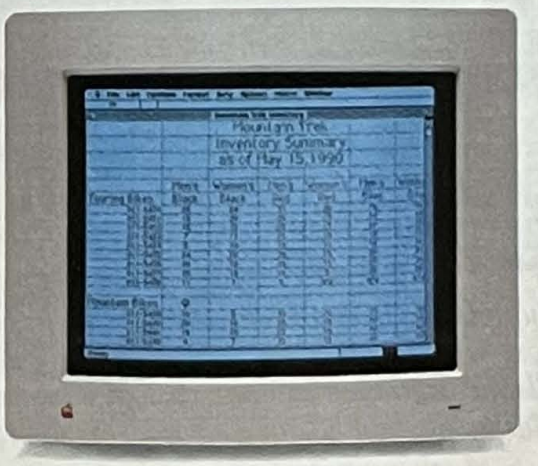
Mass Microsystems is at 550 Del Ray Ave., Sunnyvale, Calif. 94085; (408) 522-1200. □

You can't always choose the data you have to manage.

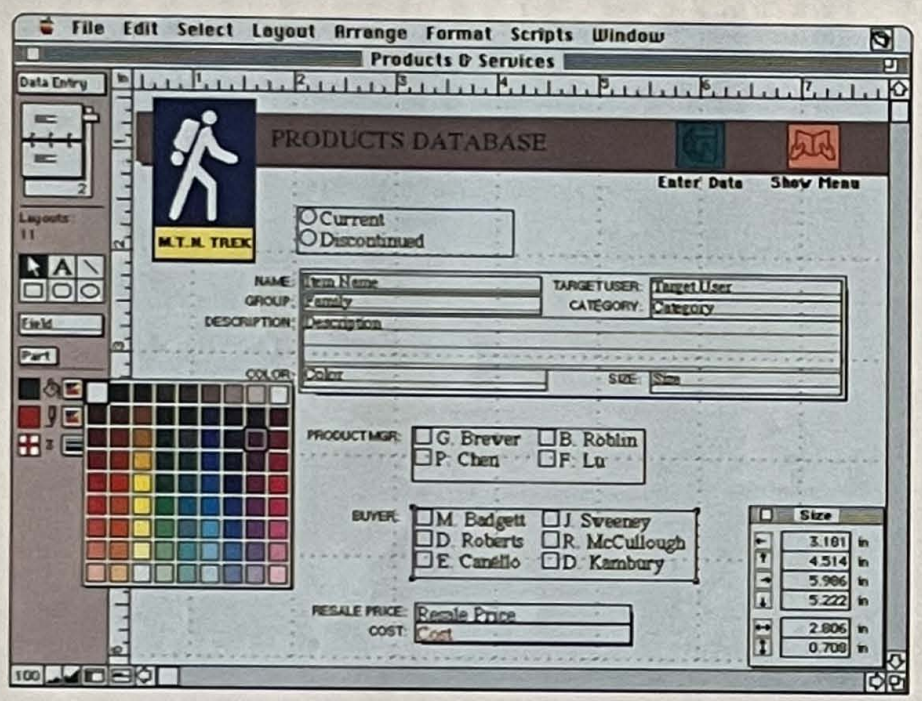




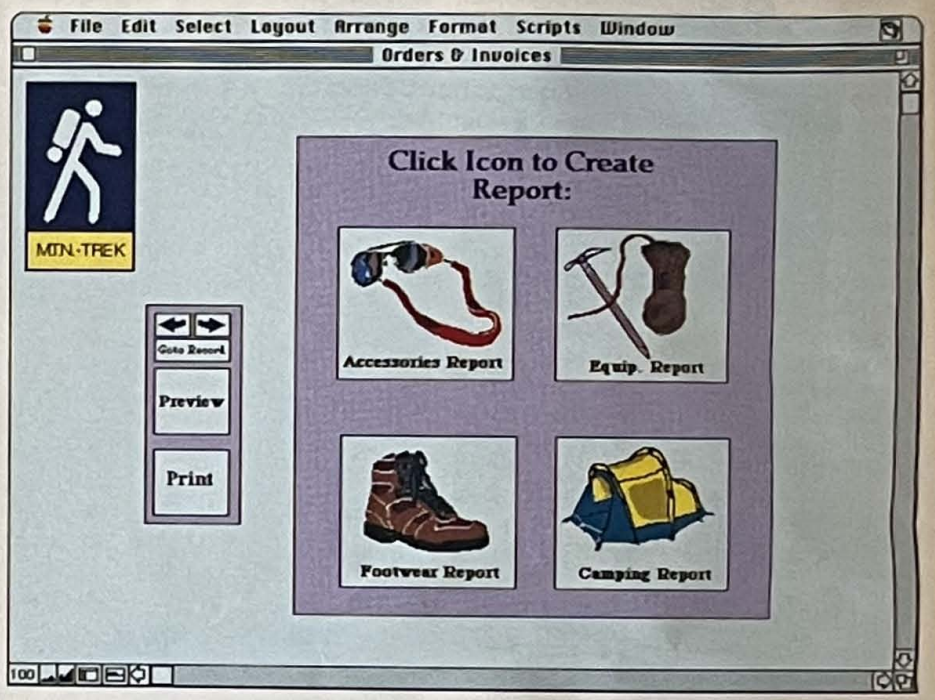




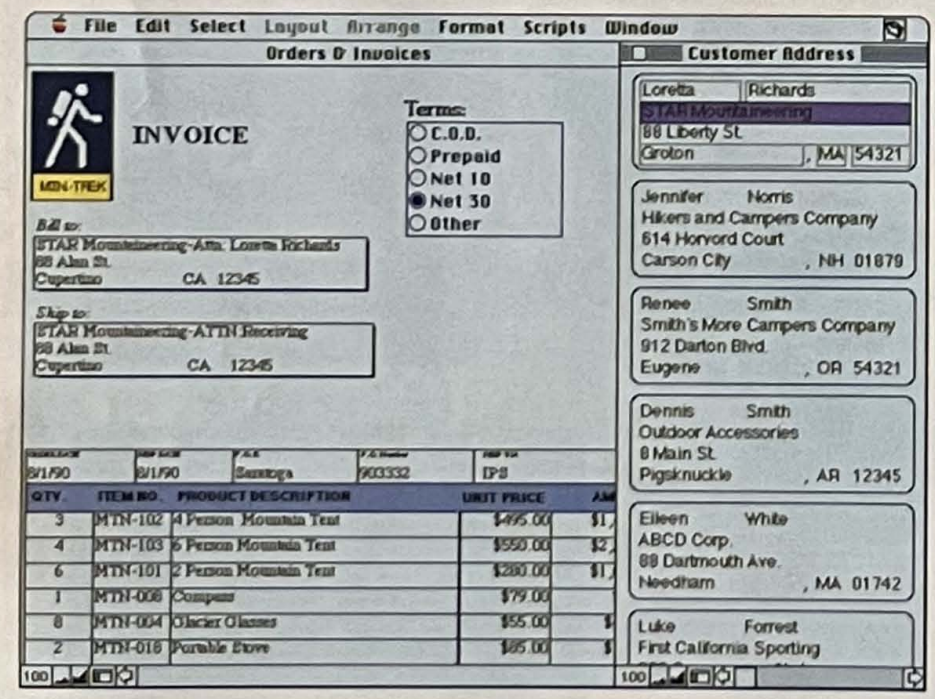
But you can choose how to manage it.



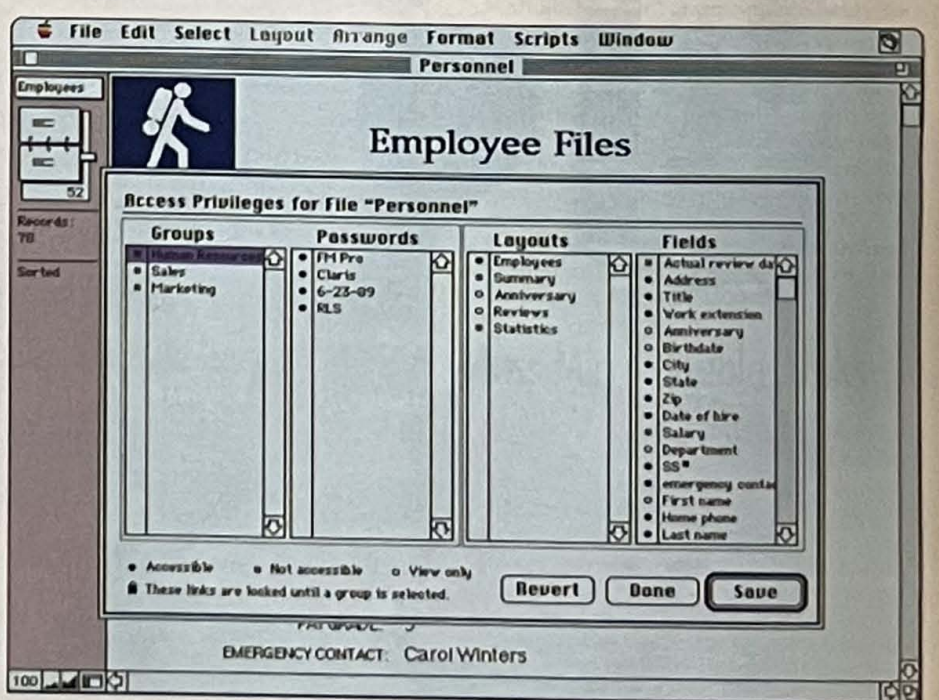
FileMaker® Pro software includes sophisticated drawing tools so you can create layouts in any form you choose. Pop-up menus, radio buttons and checkboxes make entering data fast and accurate. And a full palette of colors helps people vividly see your thoughts.



FileMaker Pro lets you automate repetitive tasks with "buttons." It's easy. Simply select any object or graphic on the screen and a "button" is born. Buttons can invoke commands, trigger scripts, and switch layouts—all without plodding through a programming language.



Multiple-file lookups let you relate data. For example, when you want your monthly invoices to each show customer address, FileMaker Pro looks at the customer name, searches the customer address file and fills in each address for you—all automatically.



You can share files on a network and control exactly who sees what on their screen. For example, if you want to share the hire date of an employee, but not his salary, simply check the appropriate boxes in the access dialog box. The hire date field will be shown. The salary field will not. Security is this simple.

And publish it.

M.T.N. Trek
Sales Report by Season

Fall

Camping	$2,765.00
Clothes	$4,842.60
Sports Equipment	$5,690.00
Mountain Bikes	$7,740.88
Season Total	$21,038.48

Spring

Camping	$369.90
Clothes	$5,351.76
Sports Equipment	$39,083.31
Mountain Bikes	$73,543.00
Season Total	$118,347.97

Summer

Camping	$95.00
Clothes	$10,339.12
Sports Equipment	$950.00
Mountain Bikes	$1,029.94
Season Total	$12,414.06

Winter

Camping	$7,320.00
Clothes	$2,720.00
Sports Equipment	$5,015.36
Mountain Bikes	$1,529.10
Season Total	$16,584.46

Total Sales
$168,384.97

Camping	$10,549.90	21%
Clothes	$23,253.48	33%
Sports Equipment	$50,738.67	22%
Mountain Bikes	$83,842.92	24%

M.T.N. Trek
Product Catalog

#721

Hiking Boots

These custom-made leather and canvas hiking boots are both comfortable and rugged. The high-rise design provides good ankle support and helps prevent injuries. The tread grips both loose soil and ice. Sizes and half sizes from 9 through 13.

$129.99

Lifetime Compass

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#598

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$289.99

See Page 12 for Ordering Information

30

Your job demands information, not data. FileMaker Pro includes a range of calculation functions: It turns raw data into business information. And with MacDraw®-based tools built in, you can display this information on the page any way you want.

All that data you've got stored can be published in eye-catching color, and in any format you can imagine. You can publish directories, forms and catalogs with precision and ease. It's almost like having a database publisher built in.

If collecting data were all it took to get promoted, we'd all be president.

Unfortunately, the world demands you actually do something with your data. And then present it in a compelling and useful way.

Which is where FileMaker Pro comes in. It's the #1 database manager for the Macintosh, stuffed with new power.

There's powerful scripting with user-definable buttons for automating tasks. Multiple-file lookups for relating data. Network access with field-by-field security for workgroups. And flexible report generation, including color and database publishing tools.

Yet, FileMaker Pro does all this without making you learn a complex programming language.

If it sounds simple, it is.

You'll find a few surprises, however. All of them pleasant.

As you use FileMaker Pro you will find more and more things to do with it. This "revealed power" is what makes FileMaker users FileMaker fanatics.

What's more, you will experience the seamless way that FileMaker Pro fits with other Claris® software. The graphic and text tools work the same as they do in our other products—so you spend more time on business and less time remembering commands. There's also XTND, a Claris invention that lets you easily exchange text and graphics with other software and computers without loss of formatting. All this raises Macintosh productivity to a new level.

But why not see for yourself? Simply stop by an authorized Claris dealer and ask to see FileMaker Pro. It's the start of a better way to manage the data you have to manage.

FileMaker Pro.
The #1 database manager for the Macintosh.

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Salient expands DiskDoubler with Version 3.0

By Henry Norr

Palo Alto, Calif. — Just weeks after the release of StuffIt Deluxe, the latest version of what has been the Mac world's standard file-compression utility, Salient Software Inc. this week will strike back with a major update to DiskDoubler, the up-and-coming challenger in the field.

DiskDoubler users can compress files in the Salient application or via a special Finder menu; a file can be decompressed in the same ways, by double-clicking it on the desktop or simply by selecting it in the Open dialog of a standard application.

New features in Version 3.0, the second major upgrade to the $79 program since it was introduced in March, include:

▸ **Automatic recompression of files.** Files previously compressed and then opened are now recompressed automatically when the user quits the application in which the file was opened.

▸ **Multiple files.** Multiple files or folders can be compressed into one file, a feature that is especially useful for archiving and telecommunications.

▸ **Image and sound algorithms.** Special algorithms are used automatically to improve compression of image and sound files.

▸ **Batching.** Batch-file capabilities allow users to automate compression of multiple files.

▸ **Interapplication communication.** Any application or desk accessory can now take advantage of DiskDoubler's capabilities. A telecommunications program, for instance, could compress a file using DiskDoubler before sending it and expand it after receiving it. Salient offers a $200 developers kit to help other programmers take advantage of its program.

David Goldstein, a New York-based developer, said he had no troubling adding DiskDoubler compression to Ultimate BBS, Ultimate Solutions Inc.'s SuperCard-based telecommunications package for service bureaus (see story, Page 29). "We just had to write a couple of little XCMDs (external commands) to access it," he said. "It only took about half an hour."

Addressing several criticisms from users of earlier versions, Salient said the program now lets users choose whether or not the compressed version of a file is deleted automatically when it is decompressed, and files are no longer expanded automatically when selected for transmission from a telecommunications program. DDExpand, an expand-only version of DiskDoubler, is included on DiskDoubler and can be distributed freely for non-profit use.

Registered users who bought DiskDoubler after July 1 will receive a free upgrade automatically. For other customers, the upgrade will cost $15.

Salient Software is at 3101 Avalon Court, Palo Alto, Calif. 94306; (415) 852-9567. □

Carolyn Said contributed to this report.

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ComputerEyes gets sharper VCR capture

By Connie Guglielmo

Dedham, Mass. — Digital Vision Inc. is shipping a free software upgrade to owners of ComputerEyes/Pro, its $450 24-bit color video digitizer for the Mac II line.

The new version contains an improved Paused VCR option designed to enhance image quality when capturing images from videocassette recorders.

A new interlace correction option helps eliminate the ragged appearance of some captured images by compensating for the different scan rates for interlaced and non-interlaced signals, which differ in the amount of time and in the sequence used for painting the lines that make up each frame on-screen.

"Most video signals are interlaced, and ComputerEyes normally automatically determines the appropriate interlace field and paints the screen," said Steve Sarsfield, Digital Vision product manager. If the video is non-interlaced but the video device attempts to simulate an interlace scan, "this can fool our software into thinking that the signal is interlaced. The resulting image is ragged or has a Venetian blind effect," Sarsfield said.

With the new Change Interlace option, the software compensates for the scan rate on subsequent captured images.

Digital Vision Inc. is located at 270 Bridge St., Dedham, Mass. 02026; (617) 329-5400. □

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Farallon updates Timbuktu/Remote

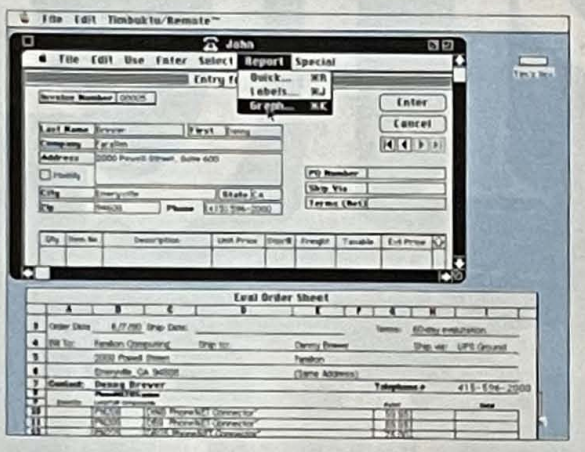
Now puts remote screen in a window

By Carolyn Said

Emeryville, Calif. — Trainers, consultants, value-added resellers and support personnel who need to view and operate remote Macintoshes will have additional tricks in their bag with the latest version of Timbuktu/Remote from Farallon Computing Inc.

Timbuktu/Remote 2.0, available now for $195, features:

- Simultaneous viewing of the remote (host) Mac's screen and the user's (or guest's) screen. The remote machine's screen becomes a window on the user's desktop, instead of taking over the full screen as in the previous version.
- Enhanced security features, including a password table to define multiple passwords and access levels, a call-back feature, and a guest log of users accessing a host machine and the functions they used.
- Additional file transfer capabilities. Now host Macs can receive files in the background, and guest users can transfer files to a designated folder on the host, enabling hosts to locate files more easily.
- Support of CCL (Connection Command Language) scripting, making it possible to use Timbuktu/Remote with more communications devices. Users can write CCL scripts to run the software over in-house PBXes, ISDN (Integrated Services Digital Network) terminal adapters and non-Hayes-compatible modems. Farallon plans to provide a CCL tool kit and user-developed CCLs in on-line forums.



Timbuktu/Remote 2.0 from Farallon Computing lets users simultaneously view a remote Mac and their own screen. Version 2.0 of the remote-control program also adds more security and file transfer features, as well as CCL scripting.

Paul Thibodeau, senior consultant for Drake University in Des Moines, Iowa, and a beta tester of Version 2.0, used the CCL scripting feature to program access through the university's Rolm PBX system. "We were able to support 2,000 Macs across campus with Timbuktu/Remote through the PBX system. The script just took half a day to write," he said.

Current users can upgrade for $50. Large sites can purchase 100 or more copies for $70 each.

Farallon Computing is at 2000 Powell St., Suite 600, Emeryville, Calif. 94608; (415) 596-9100. □

QuoteMaster gives investors real-time stock monitoring

By Henry Norr

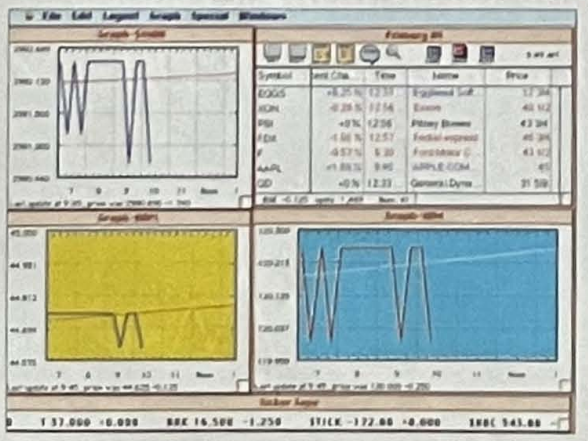
Santa Clarita, Calif. — Investors and securities professionals now can turn to their Macs for real-time monitoring of their favorite stocks, options, futures, funds, commodities, indexes and headline news using FM or satellite receivers and software called QuoteMaster from Strategic Planning Systems.

The $395 product, which processes broadcast data from the FNN Signal (formerly Lotus Signal) or Telemet services, can handle more than 50,000 price updates per day on up to 1,250 securities selected from a total of 40,000.

The software runs on any Mac and works in the background under MultiFinder, the company said. Options include alarms, separate windows for user-defined groups of securities, and charting of intraday or interday performance for any stock. All information received by QuoteMaster, including historical data and tick-by-tick or 15-minute updates, can be exported to spreadsheets or databases.

The system requires a receiver, which costs about $300, to get data via satellite or FM sideband broadcasts. According to Strategic Planning, Alexandria, Va.-based Telemet America offers 24-hour coverage of major securities and options for about $33 per month, while San Mateo, Calif.-based FNN Data Broadcasting provides the faster and more comprehensive Signal service for about $150 per month.

Strategic Planning Systems is located at 21021 Soledad Canyon Road, Suite 504, Santa Clarita, Calif. 91351; (805) 254-5897; (800) 488-5898. □



Strategic Planning Systems' QuoteMaster displays stock-market news received from FM or satellite services as tables and charts on the Mac screen. The program can be run in the background under MultiFinder, and all data can be exported.

Metamorphosis puts all fonts into Type 1

By Pamela Pfiffner

Plano, Texas — Altsys Corp. last week added Type 1 compatibility to its Metamorphosis font-conversion utility while halving the program's price from $295 to $149.

Metamorphosis 1.5, now shipping, can convert any font to Type 1, Adobe Systems Inc.'s proprietary encrypted and hinted format. Type 1 compatibility means that Metamorphosis-generated fonts may now be used with Adobe Type Manager for smoother screen representation, Altsys said.

Metamorphosis converts existing fonts into editable outlines for import into graphics and font-generation programs such as Altsys' Fontographer. In addition to the Type 1 format, Metamorphosis can save files in Type 3 PostScript, Fontographer database and Encapsulated PostScript formats.

The new version also works directly on the Mac, eliminating the need to interact with a PostScript printing device. Upgrades from Metamorphosis 1.0 are free.

Altsys Corp. is at 270 Ave. F, Suite 109, Plano, Texas 75074; (214) 424-4888. As of Sept. 1, the company will be at 269 W. Renner Road, Richardson, Texas 75080; (214) 680-2060. □

Strata revamps StrataVision 3d, distributes Pixar's MacRenderMan

By Connie Guglielmo

St. George, Utah — Strata Inc. last month added more depth to its 3-D rendering capabilities, introducing a major upgrade to StrataVision 3d and announcing that it is distributing Pixar's MacRenderMan rendering software.

- **StrataVision 3d 2.0.** Scheduled to ship in November for $695, $200 more than the previous release, Version 2.0 of the 3-D modeling and rendering program has been modified to support and take advantage of System 7.0, although it will continue to operate under 6.0 versions of the Macintosh operating system.

The new version allows developers to seamlessly integrate plug-in extensions, such as new modelers, renderers and surface textures, into the program. Users simply copy the extensions into the StrataVision folder; the program automatically incorporates them. Modeling extensions under development by Strata include a fractal-based terrain modeler and a free-form surface modeler, the company said.

Version 2.0 also promises smooth shading of 3-D objects created in StrataVision 3d or imported from other programs. In addition, rendering performance is improved. The new version's ray tracer renders three times faster than the current one, according to the company.

The new release also offers improved modeling tools that give users greater control of lathe operations and extrusion functions. Extended surface-mapping capabilities, such as stencil mapping, let users create what the company describes as "cookie-cutter" effects.

Registered StrataVision 3d owners can upgrade for $99.

The current version, 1.4, of StrataVision 3d, which started shipping in April, supports Adobe Type Manager, allowing users to create 3-D text from any PostScript font.

- **MacRenderMan.** Strata is serving as a reseller for Pixar's MacRenderMan, which began shipping last month. Strata is offering the photo-realistic rendering software, which retails for $795, with StrataVision 3d in a $1,195 bundle.

Because MacRenderMan does not have its own user interface, users must access its rendering shaders through front-end software. StrataVision 3d, one of several Mac 3-D programs that now support the RenderMan Interface Bytestream (RIB) file format, allows users to save StrataVision 3d files in RIB file format for export and rendering in MacRenderMan (see review, Page 104).

Besides saving in RIB format, StrataVision 3d's rendering preview lets users see a preview and edit the image before sending it to MacRenderMan for rendering, a process that could take minutes or several hours, depending on the complexity of the image.

Strata Inc. is located at 249 E. Tabernacle, Suite 201, St. George, Utah 84770; (801) 628-5225. □

StrataVision 3d Version 1.4 supports ATM, letting users create 3-D text from any PostScript font. Strata also introduced Version 2.0 of StrataVision 3d and said it will be distributing MacRenderMan.

Building-to-Building networks

By Raines Cohen

Campbell, Calif. — Photonics Corp. last month announced Building-to-Building Photolink, an infrared communications product used to extend AppleTalk networks outdoors. The wireless network devices, mounted indoors, can communicate through window glass to link networks separated by up to 600 feet, according to the company.

The device, like the original Photolink, supports AppleTalk's full 230.4 Kbps network speed, with built-in error correction. It also has new security features to prevent other Photolinks from "listening in."

Available now, both AppleTalk and RS-232 versions of Building-to-Building Photolink sell for $1,995 per transceiver, or $3,990 per connection. The company said its technology is often more economical than laying cable or obtaining Federal Communications Commission licenses for microwave links.

Photonics Corp. is located at 200 E. Hacienda Ave., Campbell, Calif. 95008; (408) 370-3033. □

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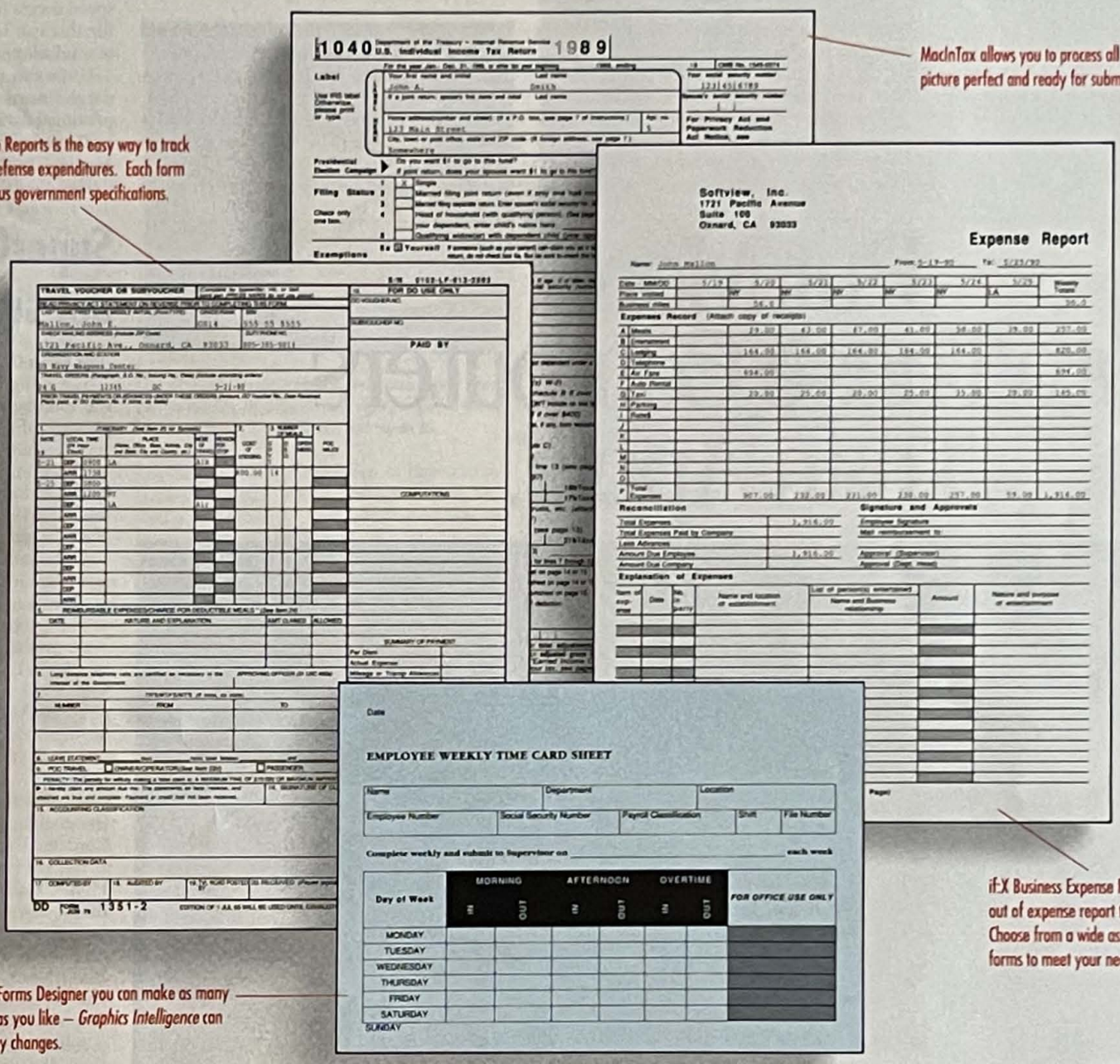

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S O F T V I E W

Simplifiler PIM: Organizing in 4th Dimension

By John Webster

Lake Oswego, Ore. — Zicon Software Corp. recently shipped Simplifiler Version 1.0, a Macintosh personal information manager (PIM) designed to help users organize the stacks of paper strewn across their desks.

Created with ACIUS Inc.'s 4th Dimension database, the program, which costs $500, ships with 4D Runtime.

The program's 225 preconfigured fields, distributed through eight files, can hold information about business or personal contacts, organizations and products. Users can search and sort files by any keyword, and the software generates letters using one of four fonts.

Although Zicon said the program is geared toward personal management, its mailing features have made a mark on business users.

"We found that it's a valuable sales-management tool. [The software] helps us organize mailings to 3,000 to 4,000 agencies per month," said beta-tester Scott Quick of Vision Business Products Inc., a Portland, Ore.-based office-products supplier.

Quick said Simplifiler provides macros to speed access to menu commands and a tickler file that can be programmed to remind users to send a letter, for instance, on any date.

Users can exchange data between flat-file databases or word processors and the 4D relational database.

Zicon Software Corp. is located at 16580 Maple Circle, Lake Oswego, Ore. 97034; (503) 635-9622. □

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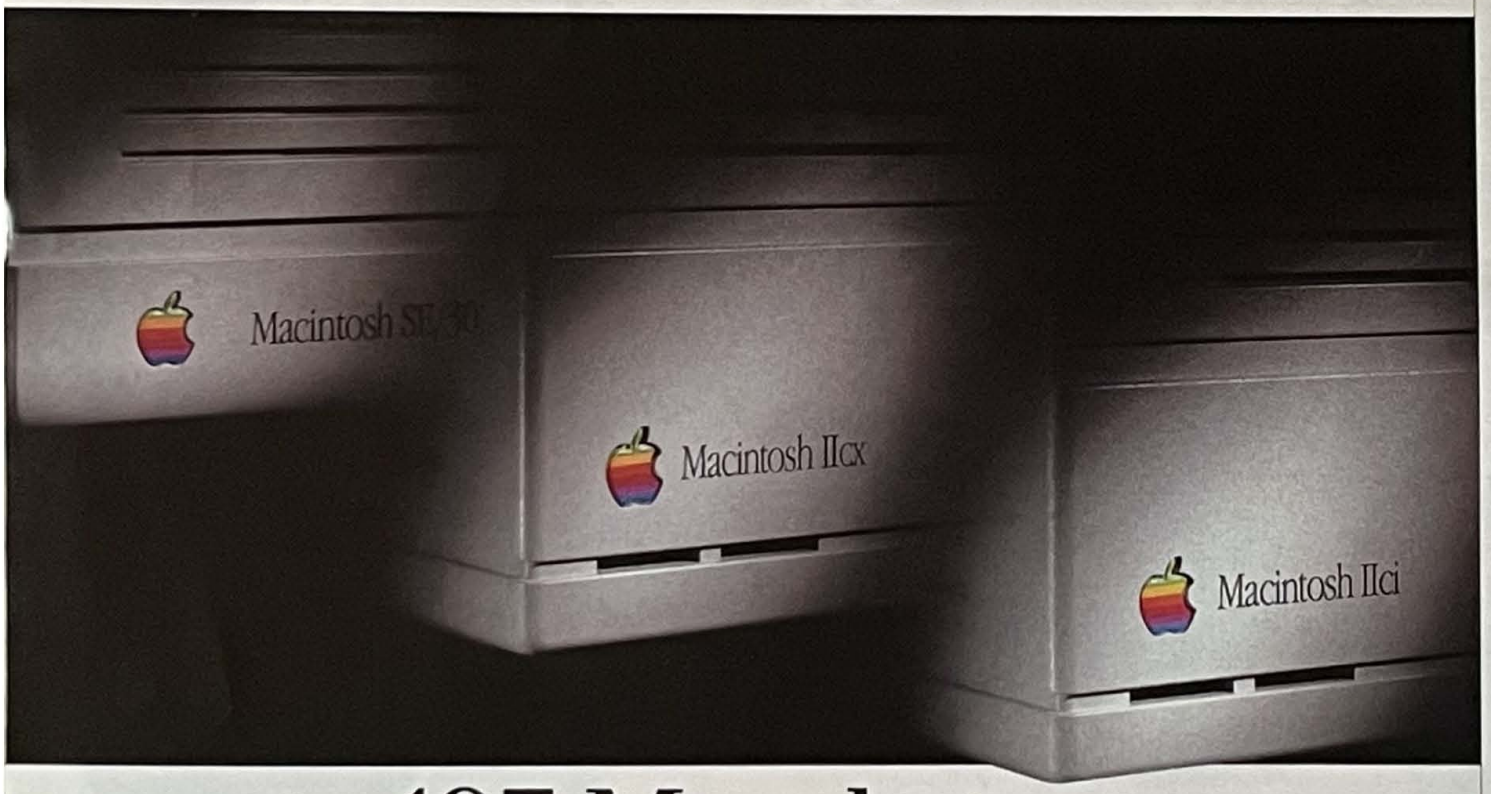

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Booth #1838, Bayside Expo

SuperCard scriptors get support package

By Raines Cohen

San Diego — SuperCard programmers will soon be able to find help through a new package of support services offered by Silicon Beach Software.

The company, a subsidiary of Seattle-based Aldus Corp., announced last month the SuperCard Developer Support Program, which is aimed at software developers, consultants and in-house corporate developers working in the hypermedia development environment.

The program, which will cost $450 per year, provides support through telephone, fax, AppleLink and America Online. It also will include mailings of technical notes, sample projects and externals, and beta versions of SuperCard, when appropriate. The company said it will attempt to provide 24-hour turnaround on all questions. Silicon Beach continues to offer its standard program of free technical support for all users of SuperCard and the company's other products.

Jim O'Connor, a SuperCard developer in Pinole, Calif., said he is looking forward to the new service, which should be ready by Aug. 13. "There are times when books and other reference materials just don't always have the answers you're looking for. Being able to be in touch with the developers can help solve scripting problems," he said.

Silicon Beach Software is located at 9770 Carroll Center Road, Suite J, San Diego, Calif. 92126; (619) 695-6956. □

MicroNet to bundle Retrospect with drives

Irvine, Calif. — MicroNet Technology Inc. last month announced that it is offering several of its removable-storage systems in specially priced bundles with Retrospect, the archiving and backup program from Dantz Development Corp.

Drives available with Retrospect include MicroNet's new CMO Canon magneto-optical device (see MacWEEK, July 31) and Micro/Removable, the company's 45-Mbyte SyQuest removable-cartridge unit.

Due this month, the Canon drive will be offered at $4,395 with Retrospect or $4,295 without, $200 below the prices originally announced. MicroNet cited a reduction from the supplier for the prerelease price cut.

The SyQuest unit is priced at $1,245 with Retrospect or $1,145 without.

The Dantz software already comes standard with Micro/DAT, MicroNet's 1.3-Gbyte, 4mm digital audio tape system, which retails for $4,095.

MicroNet Technology Inc. is at 20 Mason, Irvine, Calif. 92718; (714) 837-6033. □

Fast relief from latest HP pen plotter

By Rochelle Garner

Boston — Taking another opportunity to show its commitment to the Macintosh market, Hewlett-Packard Co. is announcing the newest addition to its line of desktop pen plotters at Macworld Expo here this week.

Due this month, the HP 7550 Plus eight-pen plotter supports the company's advanced HP-GL/2 graphics language. Improved data compaction, new algorithms and a new processor enable the device to plot 20 percent faster than the HP 7550A, which it replaces. According to the company, the 7550 Plus is the fastest plotter in its desktop family, getting up to speed with 6g acceleration and providing a maximum pen speed of 80 centimeters per second.

The 7550 Plus produces A- and B-size plots, as well as the European A3 and A4 standards on paper, film and vellum.

In addition, HP offers 1- and 2-Mbyte memory upgrades, at $495 and $740 respectively, to allow users to store plot files in memory, replot files on demand and quickly regain use of their computers.

HP is demonstrating the 7550 Plus with PLOTTERgeist, a Chooser-selectable driver from Palomar Software Inc. of Oceanside, Calif. (see story, Page 30).

The HP 7550 Plus can produce A- and B-size plots on paper, vellum and film. HP ranks the new eight-pen plotter, which supports HP-GL/2, as its fastest desktop model.

The HP 7550 Plus comes in two configurations: Option 005, priced at $4,195, includes IEEE-488 and serial interfaces; the $3,995 option 006 comes with RS-232 serial and Centronics parallel interfaces.

Information on the new plotter is available from Hewlett-Packard Co. Inquiries, 19310 Pruneridge Ave., Cupertino, Calif. 95014; (800) 752-0900. □

Ultimate Solution to DTP file transmission

By Carolyn Said

Indianapolis — Ultimate Solutions Inc. is offering a product for desktop publishers designed to eliminate the headaches from transmitting files to a service bureau for final output.

Ultimate BBS, a customizable telecommunications program released last month, lets customers batch files off-line, prepare processing instructions and then automatically send the information to their service bureaus.

Version 2.0, to ship Aug. 15 as a free upgrade, will use a special version of DiskDoubler, the compression utility from Salient Software Inc. of Palo Alto, Calif., to compress files automatically for sending.

Ultimate BBS also lets users schedule file-transmission times in advance, maintain a history file and download available screen fonts.

A stand-alone application written in San Diego-based Silicon Beach Software's SuperCard, Ultimate BBS is a shell designed to be customized with artwork and descriptions tailored to a particular service bureau. The program's $1,995 price tag includes customization by Ultimate Solutions.

"It's very, very simple to use," said beta-user Kathy Parker, director of computer services at Shapiro's House of Type in Toledo, Ohio. "Literally anybody's monkey could run it. All they have to do is select the files they want to send and tell it to go."

Parker said she spends about half an hour or less setting up new customers with the software. Simple modem access gives her company a competitive edge over other service bureaus because many users are "scared to death" of telecom software, she added.

Service bureaus receive a copy of Ultimate BBS for their use and a customer software package that they may duplicate and distribute freely. The customer software is programmed to automatically upgrade when it dials in to an upgraded version of the service bureau software. The BBS software, which requires a dedicated Mac, can receive files from customers, including MS-DOS users, who do not have the program.

Ultimate Solutions Inc. is located at 3277 Melbourne Road S. Drive, Indianapolis, Ind. 46208; (317) 299-2992. □

Tactics' TRS equalizes travel time, sales load

By Raines Cohen

Andover, Mass. — Companies allocating territories for their sales staff soon will be able to automate the job with TRS from Tactics Sales Performance Analysis Inc.

The software, due in early September, uses artificial intelligence and management-science techniques to assign customers to territories or areas, the company said. TRS can automatically determine equal territories based on sales value and travel time from territory bases to customer locations.

The software can base its allocations on any geographical unit, such as county or five-digit ZIP codes. It helps plan for fixed (existing) or floating (optimal) base sites. A digital U.S. highway database provides realistic drive-time information. According to the company, the product's speed allows users to try multiple "what-if" scenarios to determine optimal site location.

TRS links to geographical information systems (GIS) and spatial decision-support software (DSS) packages, including Tactic's own Tactician software, which performs on-screen mapping linked to spreadsheets and databases via Apple's Database Access Language (formerly CL/1).

TRS sells for $499 to $10,000, depending on configuration.

Tactics Sales Performance Analysis Inc. is located at 16 Haverhill St., Third Floor, Andover, Mass. 01810; (508) 475-4475. □

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S O F T V I E W

EasyServer: 'IIfx speed, SE price'

By Margie Wylie

Mesa, Ariz. — Claiming to deliver "the speed of a IIfx for the price of a Mac SE," ShirtPocket Software will ship an Intel-based AppleShare server in September.

EasyServer uses standard Mac external disk drives to store files in the AppleShare format, according to the company. It runs a ported version of EasyShare, the background file-server software ShirtPocket introduced earlier this year at $99.95 per 10-user server (see MacWEEK, Feb. 13).

Because EasyShare is 100 percent AppleShare-compatible, the company said, users are guaranteed access to their data even if an EasyShare server goes down: The EasyServer disk can be moved to any Mac on the network and the files accessed via EasyShare or the file-sharing capabilities that will be built into System 7.0.

Other Intel-based servers, such as Novell Inc.'s NetWare for Macintosh and 3Com Corp.'s 3+Open for Macintosh, use formats AppleShare can't read.

"If one of those servers goes down, you are out of luck until it comes back up," said ShirtPocket principal Jay Eaglstun.

The base server model, with a 12-MHz 80286 CPU, costs $1,995 and ships with an AppleTalk interface. Ethernet or token-ring adapters are available for an additional $350 each. ShirtPocket said it also will offer versions with 16-MHz 80286 and 25-MHz 80386 CPUs. Pricing has not been determined.

The EasyServer has a SCSI port with direct memory access, which ShirtPocket said brings its performance as a server to Mac IIfx levels.

ShirtPocket Software can be reached at P.O. Box 40666, Mesa, Ariz. 85274-0666; (602) 966-7667. □

Asanté 10T Hub due in September

By Margie Wylie

Sunnyvale, Calif. — While the 10BASE T Ethernet-over-phone-wire standard slouches toward approval by the Institute of Electrical & Electronic Engineers, Asanté Technologies Inc. is rounding out its product line with 10BASE T Ethernet hubs.

Although the IBM PC 10BASE T market is already saturated, entries on the Mac side are just beginning to emerge. The Asanté 10T Hub, due in mid-September, is the second 10BASE T hub introduced exclusively for the Macintosh. Emeryville, Calif.-based Farallon Computing Inc. shipped its Star Controller EN hubs, which are 10BASE T-compliant, earlier this year.

Supporting a maximum of 12 workstations, the $1,395 Asanté 10T Hub features:

Auto-partitioning, which automatically detects and turns off bad ports that might otherwise jam the network.

Link-integrity control, which will allow cards based on earlier drafts of the 10BASE T specification to work with the network.

Support for optional network-management software, such as Apple's InterPoll.

Asanté also offers $395 10BASE T cards for the Mac SE and $495 cards for the SE/30 and II family.

Under the consideration of the IEEE 802.3 committee on Ethernet, the 10BASE T specification for running Ethernet protocols over the unshielded twisted-pair phone wiring already installed in most buildings will provide interoperability among compliant products.

Industry observers expect the final draft of the standard, on which Asanté's and most other current 10BASE T products are based, to pass sometime this fall.

Asanté Technologies is at 405 Tasman Drive, Sunnyvale, Calif. 94089; (408) 734-4844. □

Palomar to upgrade PLOTTERgeist driver

Oceanside, Calif. — Palomar Software Inc. is expanding the list of plotters supported by its PLOTTERgeist driver, the company said.

Due in September, Version 1.1 of the Chooser-level plotter driver will let users plot to all current plotter models from CalComp Inc., Houston Instrument, Hewlett-Packard Co. and Ioline Corp. In addition, the new PLOTTERgeist will support the new HP-GL/2 plotting description language for faster plotting to HP's DraftMaster SX, RX and MX large-format pen plotters.

Current users of the $395 program can upgrade without charge.

Palomar Software Inc. is located at 2964 Oceanside Blvd., Suite D, Oceanside, Calif. 92054; (619) 721-7000. □

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NRC gateways AppleTalk, TCP/IP

By Margie Wylie

San Jose, Calif. — Network Resources Corp. last month introduced two software solutions for mixing AppleTalk and TCP/IP networks.

▸ The $795 MultiGate Mac software runs in the background on any Mac II to provide AppleTalk-to-TCP/IP internetworking for up to six Ethernet connections and one LocalTalk network connection.

Unlike generic Ethernet-to-AppleTalk routers, MultiGate Mac is configured especially to help TCP/IP and AppleTalk networks interoperate. Features include TCP/IP-to-TCP/IP routing, IP-in-AppleTalk encapsulation and IPTalk support.

▸ IPGate is a $395 downloadable software module that lets the MultiGate 2000, NRC's hardware router, act as an AppleTalk-to-TCP/IP gateway.

Both software gateways support SNMP (Simple Network Management Protocol). Alternatively, the products provide a password-protected interface that is accessible by any Unix or Mac workstation capable of establishing a Telnet session, the company said.

NRC is located at 2450 Autumnvale Drive, San Jose, Calif. 95131; (408) 263-8100. □

Heizer converts stacks to Windows ToolBook

By Raines Cohen

Pleasant Hill, Calif. — Heizer Software last week shipped ConvertIt!, an application that converts HyperCard 1.x stacks into "books" usable by Asymetrix Corp.'s ToolBook under Windows 3.0.

ConvertIt! translates stacks into an intermediate file format called HIFF (Hypermedia Interchange File Format) for transfer to DOS machines and eventual translation into ToolBook books.

ToolBook developers can use ConvertIt! to translate complete stacks; to reconstruct all or some of the objects in a stack; to translate HyperTalk code into OpenScript, ToolBook's native language; and to port bit maps and icons from a stack into ToolBook as paint objects. External commands (XCMDs) and functions are machine-dependent and cannot be translated directly.

ConvertIt!, which sells for $199, typically converts 80 percent or more of stacks, the company said. An upgrade due later this year will support HyperCard 2.0.

Asymetrix last week announced a $450 ToolBook Author's Resource Kit, including several utilities and royalty-free distribution rights to the runtime version of ToolBook.

Heizer Software can be reached at P.O. Box 232019, Pleasant Hill, Calif. 94523; (415) 943-7667; (800) 888-7667. □

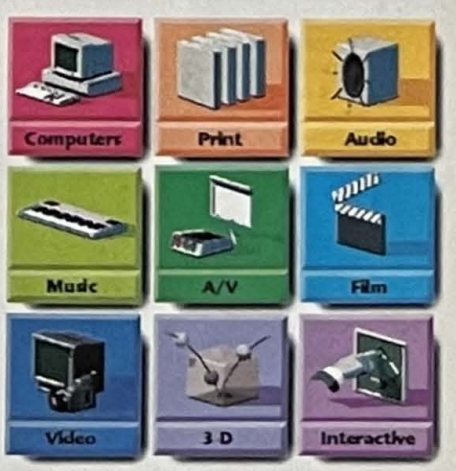
Multimedia mag set for expo preview

Sausalito, Calif. — MacMedia, a new magazine from HyperMedia Communications Inc., will be shown for the first time at this week's Macworld Expo. It will focus on multimedia technology, people, projects and tools. The magazine will feature a Yellow Pages-style directory of industry professionals.

The company had been working on a CD-ROM version of the publication in a joint venture with New Media Group of Mill Valley, Calif.; the latter now plans to publish independently.

Charter subscriptions to the print version of the magazine, which will be published bimonthly, will be $19.97 for seven issues.

HyperMedia Communications Inc. is located at 501 Second St., San Francisco, Calif. 94107; (415) 243-9885. □



This January, New Media Group will independently publish the MacMedia-related New Media Resource Guide, a CD-ROM that will bear a front end like the one shown here.

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Microseeds warns Rival users of DC-2000 incompatibility

By Henry Norr

Tampa, Fla. — Microseeds Publishing Inc. last week issued a public warning of a dangerous incompatibility between its Rival antivirus program and tape drives that use DC-2000 format tapes, including backup devices from Apple, Jasmine Technologies Inc., Tecmar and many other vendors.

This problem could result in unexpected initialization of the user's hard disk.

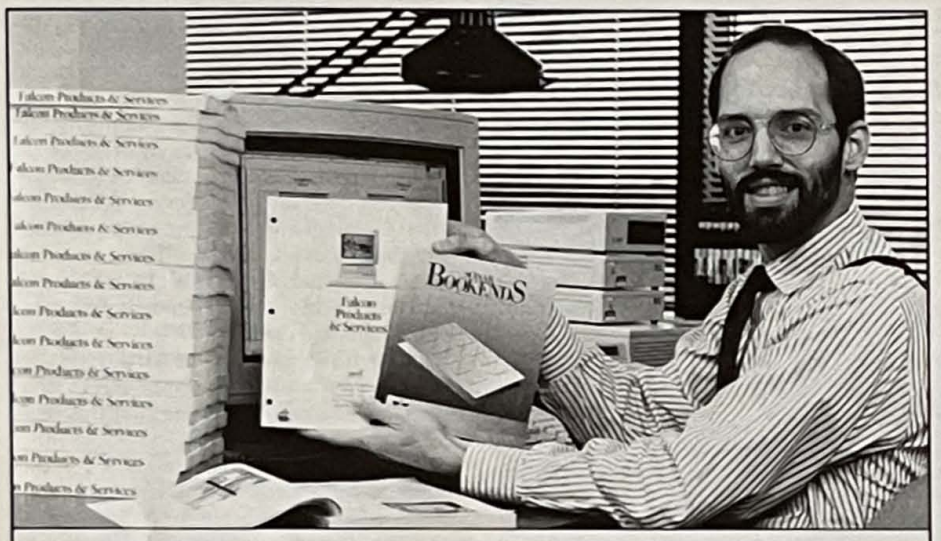
The company urged Rival users with DC-2000 tape drives to remove the program from their System folder and restart their computer before backing up.

No customers have lost data because of the incompatibility, according to Microseeds President Robin Lane. It was discovered, she said, in a testing lab at Jasmine in San Francisco.

The company had already contacted registered owners of the $99 Control Panel device to warn them about the problem, Lane said. At press time, a new version that solves the problem was in testing and was scheduled to be shipped to all registered owners late last week.

Lane emphasized that Rival 1.1, the version the company has been shipping since the program was introduced in April, is safe except when used with the DC-2000 tape units. The well-received program (see MacWEEK, July 10) features a highly graphical interface and an unobtrusive approach to virus protection. It can easily be upgraded in the event of new infections.

Microseeds Publishing Inc. is located at 7030-B W. Hillsborough Ave., Tampa, Fla. 33634; (813) 882-8635. □



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–Matt Arozian, Director of Creative Services, Falcon Microsystems

When the Federal government buys Macintosh™ products, they often buy from Falcon Microsytem's GSA catalog. Weighing in at 495 pages, it's easily the biggest single accumulation of Mac hardware, software and services available. Putting together this massive catalog was a massive effort for 14 people. But this year, after the page layout phase was completed, one person gave the catalog an index with hardly any effort at all.

Matt Arozian, Falcon's Director of Creative Services, used Sonar™ Bookends™. In the past creating the index for Falcon's catalog required looking up each individual entry and manually transfering the information to the index. One alternative considered was to use the 'marking' function offered by some word processors and page layout programs. But that was hardly much better because it still required dealing individually with the words and phrases to be indexed. That's where Sonar Bookends came in.

Using a list of Falcon's products and their manufacturers, Sonar Bookends processed the completed catalog and generated an error-free and comprehensive index. Instead of hours or days, creating the index took just minutes.

This is just one example of how Sonar Bookends is being used to easily add an index or table of contents to written materials. Just about anything you create — manuals, reports, proposals and books can be indexed. Sonar Bookends will use a list of words you specify or index every word as it appears. Common words can be skipped and index depth is unlimited. Of course one of the best features is the price: $129.95

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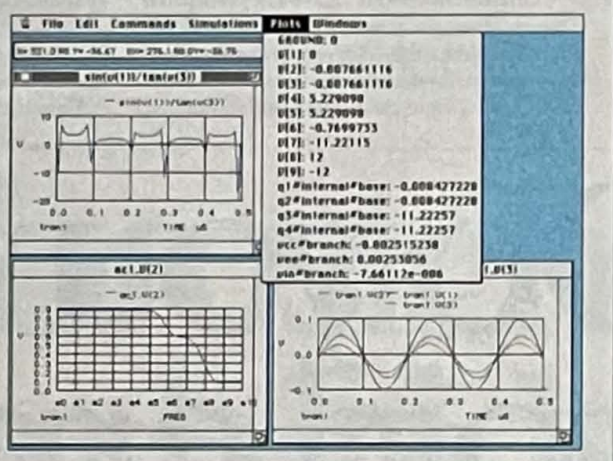
MacSPICE Pro adds interactive simulations, real-time plotting

By Rochelle Garner

Palo Alto, Calif. — Deutsch Research recently announced MacSPICE Professional 4.0, an interactive simulation program for designers of both analog and digital circuits.

Priced at $1,995, MacSPICE Professional offers interactive circuit simulation; real-time waveform plotting; and multiple windows for displaying input and output, including multiple temperature values.

"You can make a change in the circuit and a few seconds later see how the waveform changed," said Jeff Deutsch, president of the company.



MacSPICE Professional can display waveform input and output in multiple windows. The screen above shows the results of waveform functions (upper left), linear AC analysis (lower left) and transient analysis (bottom right).

According to Deutsch, the program begins plotting waveforms in real time as the simulation progresses, providing users with visual feedback of design errors. It also provides a continually updated estimation of remaining simulation time.

Based on 3C1 of Berkeley SPICE, the industry standard for analog simulation, Version 4.0 of MacSPICE Professional allows users to specify independent temperatures for different components in a single simulation. In addition, the program's analog behavorial-level modeling feature lets designers specify circuit blocks using mathematical equations.

Other features include a macro language for automating analysis procedures. A separate program, called MacSPICE Model Maker, automatically generates component models from values typed in from a data sheet or from test measurements. It is included with Version 4.0.

MacSPICE Professional can perform linear AC analysis, non-linear DC analysis, non-linear transient analysis and pole-zero analysis for defining infinite and zero responses for use when designing filter circuits.

Deutsch Research is at 761 Desoto Drive, Palo Alto, Calif. 94303; (415) 327-8677. □

Drive reads WORM, erasable media

By Henry Norr

Woburn, Mass. — Optical Access International Inc. will this week unveil what it called "the world's first multifunction optical storage system for Macintosh," a drive that can read from and write to both WORM and erasable optical discs.

Based on a new dual-mode technology introduced in June by Pioneer Communications of America Inc. (see MacWEEK, June 5), the Access 650MF incorporates a 5.25-inch mechanism from Laser Magnetic Storage International Co. The drive switches transparently between WORM (write-once-read-many) and erasable modes, automatically recognizing what type of media is inserted.

The drive, which uses 654-Mbyte dual-sided cartridges in a new sampled servo format, features an average access time of 53 milliseconds and a sustained transfer rate of 491 Kbytes per second. It can read existing WORM cartridges used in Laser Magnetic Storage International LD-510 drives but cannot read from or write to the cartridges used in other erasable optical systems on the market.

Available now, the Optical Access International SCSI drive carries a list price of $4,995, but the company said it is offering a special promotional price of $3,295 on orders received before Sept. 15.

The drive has a 256-Kbyte hardware buffer to improve performance. In WORM mode, the company said, the drive maximizes disk space by sequentially writing to only the changed blocks as files are updated.

Optical Access International will offer WORM cartridges at $125 and erasable ones at $250 for the new drive. Aside from a floppy disk containing the company's device driver, no media are shipped with the drive.

Optical Access International Inc. is located at 36 Commerce Way, Woburn, Mass. 01801; (617) 935-2679; (800) 523-2679. □

Goldstar monitor in sync with Macintosh II

San Jose, Calif. — Goldstar Technology Inc. is stressing ergonomics with its latest 14-inch color multisynching monitor for the Mac II line.

Available now, the $699 Model 1450 Plus RGB (red, green, blue) color monitor features sliding brightness and contrast controls and supports three refresh rates and five screen resolutions, including Apple's standard 66.7-Hz refresh rate and 640-by-480-pixel resolution.

The Plus monitor line also includes eight color models and one paper-white monochrome model that range in price from $299 to $1,199.

In addition to Apple's standard Mac II video card, the company said, the 1450 Plus works with Apple's Display Card 4•8 and with the Mac IIci's on-board video circuitry.

Goldstar Technology is at 3003 N. First St., San Jose, Calif. 95134; (408) 432-1331. □

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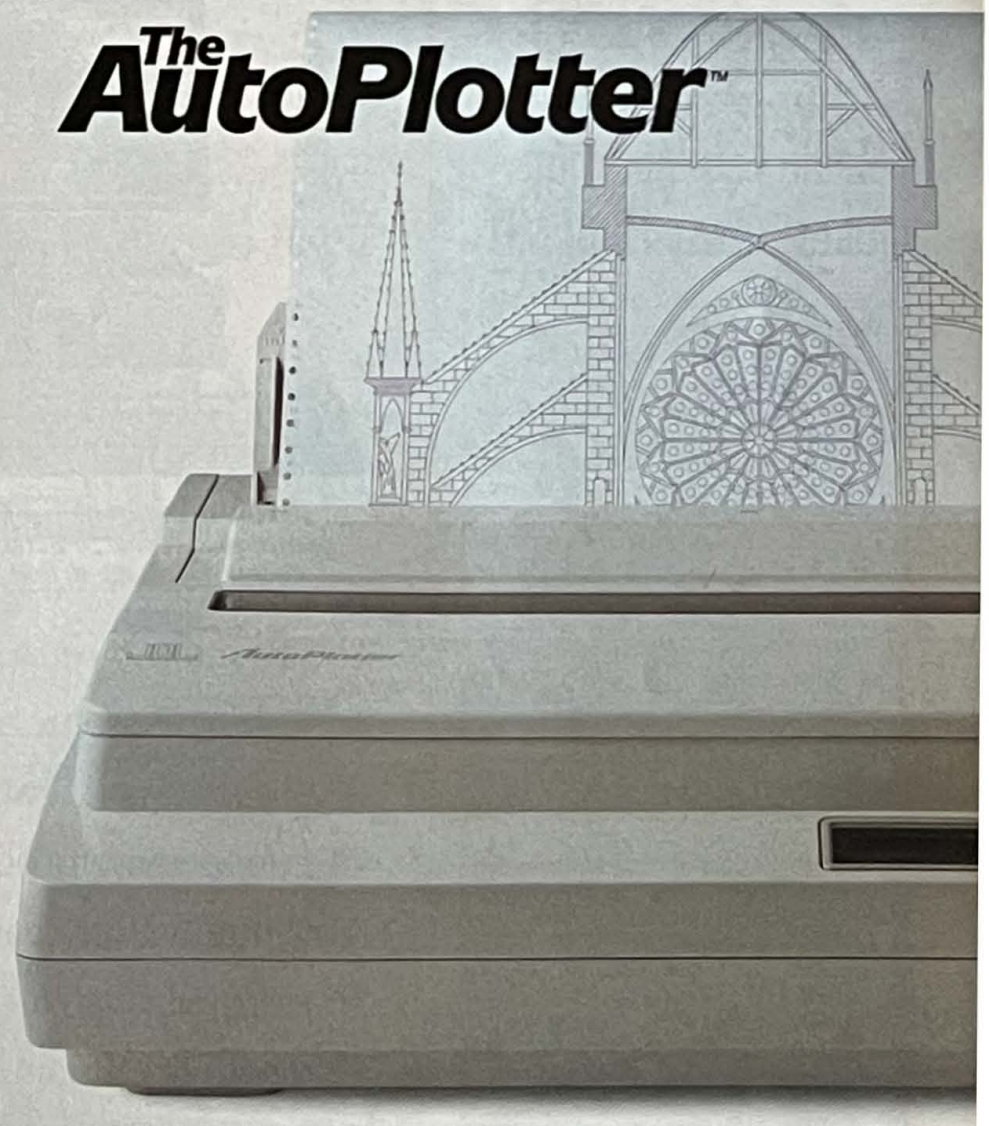

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Natural Intelligence makes 4D development easy

Shell helps users build 'clean, classic' Mac apps

By Henry Norr

Cambridge, Mass. — Natural Intelligence Inc. last month introduced Easy4D, a feature-laden application shell and development environment for ACIUS Inc.'s 4th Dimension.

Available now at an introductory price of $299, Easy4D provides a database that developers can use as a foundation for their own applications, reducing development, debugging and updating time. For the user, the company said, Easy4D's preconfigured layouts, buttons and menus ensure that applications will carry "a clean, consistent, classic Macintosh interface."

Features built into Easy4D include:

- **User-customizable help.** Easy4D's HelpMemos provide context-sensitive online help. Help information can be imported or exported in text format, and users can personalize the system by attaching notes to Help topics.
- **Word processing with mail-merge capabilities.** The program's Print Merge Editor supports separately formatted headers and footers, a Formula Editor for building expressions, and a Microsoft Wordlike glossary function.
- **Management of custom reports.** The program lets users search, sort and attach descriptive information to all 4D report types. Reports are listed in a dialog box that resembles the Mac's standard Open dialog, complete with small icons, a hierarchical system of nested folders and a Finderlike Get Info facility.
- **Keywords.** The package's EasyKeys feature supports pop-up keyword selection and on-the-fly additions to the keyword list.
- **Multiple layouts.** The program lets users select from among multiple input and output layouts in each file. A library of fully functional templates that can be copied and pasted to create input and output layouts is included.
- **Import/export.** Easy4D's Import/Export Manager provides several features not available in the ACIUS package, including support for fixed-length records, field-name headers and quote-enclosed fields.
- **Preferences.** A Preference Editor lets the developer set up a system of user preferences without editing layouts or writing code.
- **Extended debugging.** Extending 4D's own debugging capabilities, Easy 4D allows direct querying of all fields and variables; evaluates expressions; executes statements; maintains a history of the last 10 debugger entries; and lists all 4D commands, functions and operators in pop-up menus.

Easy4D comes with four heavily illustrated

Media Lab Mac man takes it Easy4D at MIT

"Easy4D is too slick for words," said Robert Murray, Mac administrator at the Media Lab at the Massachusetts Institute of Technology in Cambridge and a beta tester of Natural Intelligence's new application shell and development environment. "It gives me easy access to all the best techniques for [4th Dimension] coding."

Murray, who used 4D from ACIUS to create a variety of applications for the lab's administration, including databases of visitors, sponsors, personnel and intellectual property, said he has now ported his programs to Easy4D to take advantage of its elegant interface. "I used 4D Mover (a $200 utility marketed by ACIUS) to bring my file structure over," he said. "All I had to do was add the layouts for my files and hook in my procedures to Easy4D's."

Because all the programs now have the same interface, which he said is very clearly explained in the user manual, users are finding the applications much easier to use, according to Murray.

"It's a real godsend for people like me," said Murray, who manages the lab's Mac network in addition to developing databases. "Independent developers maybe can write their own shell, but I just don't have time." — *By Henry Norr*

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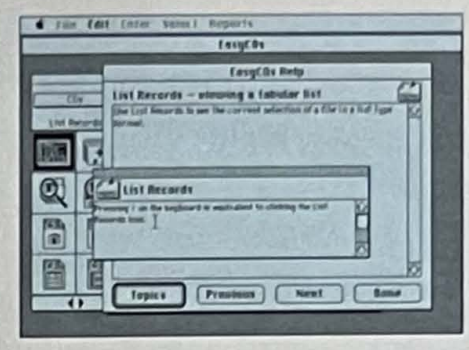
manuals, totaling more than 300 pages. One of the manuals, a concise guide for end users, is delivered in electronic form as well as hard copy.

The Easy4D price includes 60 minutes of technical support over the phone. Natural Intelligence also offers support on the company's own bulletin board and on ACIUS' CompuServe forum.

The program, available directly from Natural Intelligence, comes with a full 30-day money-back guarantee. No licensing fee is required for non-commercial applications; developers who wish to incorporate Easy4D into commercial programs should contact the company.

Natural Intelligence Inc. is located at 86 Richdale Ave., Cambridge, Mass. 02140; (617) 266-7858; (800) 999-4649. □



One feature of Easy4D, Natural Intelligence's new application shell and development environment for ACIUS' 4th Dimension, is a help system that developers and users can customize for their own applications.

Microtek Lab beefs up scanner line, trims prices

By Pamela Pfiffner

Torrance, Calif. — Microtek Lab Inc. this month introduced a new version of its color and gray-scale scanner and announced price reductions on two of its gray-scale scanners.

Microtek's MSF-300ZS Color/Gray Scanner is based on the company's earlier 300-dpi MSF-300Z, which can capture 24-bit color and 256 gray-scale levels. While the previous scanner had an external SCSI connection, the new unit, priced like the old one at $2,695, has a built-in SCSI interface.

The MSF-300ZS comes bundled with two Letraset applications with a retail value of more than $2,450: ColorStudio, Letraset's 24-bit color image-editing and separation software, and ImageStudio, its gray-scale editing program.

Owners of the MSF-300Z cannot upgrade their scanner hardware, but they can buy the two Letraset programs at special prices. The programs are $299 for customers who purchased the MSF-300Z between June 23 and July 23 and $399 for customers who purchased it between Jan. 1 and June 22.

Microtek also reduced the price of the MSF-300GS, its eight-bit gray-scale SCSI scanner, and the MSF-300G, its MS-DOS-oriented equivalent, from $2,195 to $1,895. The company said it will now bundle ImageStudio with the MSF-300GS.

Microtek Lab Inc. is located at 680 Knox St., Torrance, Calif. 90502; (213) 321-2121. □

Insignia's AccessPC not accessible yet

Sunnyvale, Calif. — Insignia Solutions Inc., which in early June said it would release its new AccessPC utility in July, and then in late June announced that it had shipped the product ahead of schedule, last week acknowledged that the software is still in beta testing.

Insignia's latest prediction is that the program, a Startup document (INIT) designed to make files and directories from IBM PC-formatted disks visible on the Mac desktop, will be available in mid-August. Designed to compete with Dayna Communications Inc.'s DOS mounter, AccessPC will have an introductory price of $99.95.

Insignia Solutions Inc. is located at 254 San Geronimo Way, Sunnyvale, Calif. 94086; (408) 522-7600. □

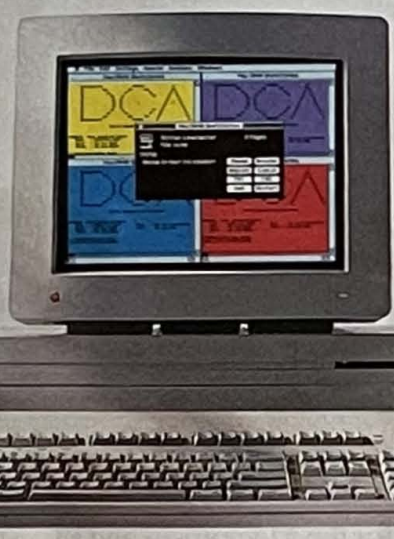
3Com backs Ether cards with lifetime warranty

Santa Clara, Calif. — 3Com Corp. is so confident of its Ethernet cards that the company is replacing its three-year warranty with a lifetime limited warranty on its full line, including the EtherLink/NB Ethernet card for the Mac II and the EtherLink/SE for the Mac SE.

The company is promising to repair or replace a failed card as long as it is installed in the original device listed on the returned registration card, a spokeswoman said.

3Com Corp. is located at 3165 Kifer Road, Santa Clara, Calif. 95052; (408) 562-6400. □

the foresight assing hindsight?



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and neither will anyone else. For more information call 1-800-241-IRMA ext. 61H.*

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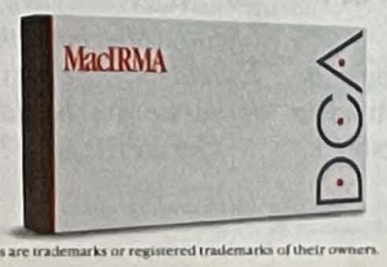

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Radius price cuts

Lower price tags for graphics products

PRODUCT	DESCRIPTION	PREVIOUS PRICE	NEW PRICE
DirectColor/24 Interface	24-bit color graphics board	$4,095	$3,595
DirectColor/8 Interface	8-bit color graphics board	$2,095	$1,895
DirectColor Memory Expansion Kit	DirectColor/8 memory upgrade to 16-bit color	$1,095	$895
Gray Scale/Color Interface	8-bit graphics board	$1,895	$1,395
QuickColor Graphics Engine	Graphics coprocessor board	$795	$595

Radius slashes display board prices

QuickDraw accelerator now available for $595

By John Webster

San Jose, Calif. — Radius Inc. last month announced sweeping price cuts on five display products, citing intense competitive pressure and lower overhead costs in the manufacturing process as impetus for the cuts.

The price reductions affect the following products:

▸ **DirectColor/24 Interface.** The company's 24-bit color graphics board now carries a $3,595 retail price, down from $4,095.

▸ **DirectColor/8 Interface.** The eight-bit entry-level version, previously priced at $2,095, now retails for $1,895.

▸ **DirectColor Memory Expansion Kit.** The memory upgrade, which supplies the DirectColor/8 board with enough memory to show 16-bit color, was reduced from $1,095 to $895.

▸ **Gray Scale/Color Interface.** The price of Radius' eight-bit board, which works with the company's 19- and 21-inch gray-scale monitor or 13-inch color display, was lowered from $1,895 to $1,395.

▸ **QuickColor Graphics Engine.** The RISC (reduced instruction set computing)-based QuickDraw accelerator board, priced at $795 since its introduction a year ago, is now $595. The single-slot NuBus card works only with Radius display systems.

Radius Inc. is located at 1710 Fortune Drive, San Jose, Calif. 95131; (408) 434-1010. □

Cheshire lets users create business charts

By Henry Norr

Pleasantville, N.Y. — Cheshire, a utility due late next month from Abbott Systems Inc., will let users of Microsoft Word, Aldus PageMaker, and Claris Corp.'s MacWrite II and MacDraw II add business charts to their documents with just a few keystrokes.

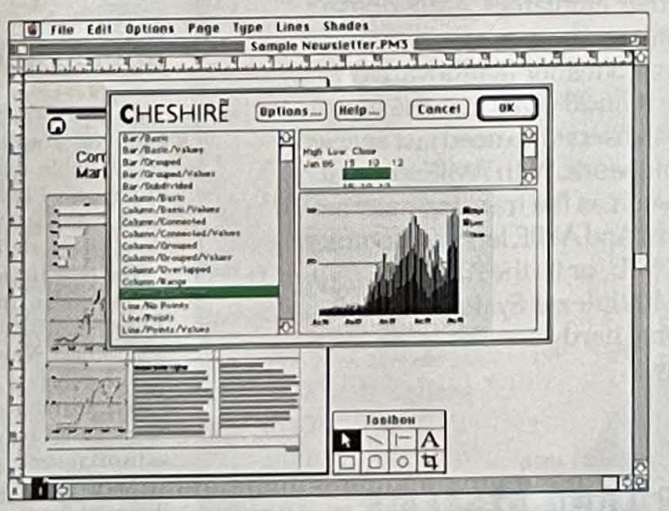
The new Startup document (INIT) supports 21 basic bar, column, line and surface chart types. Users simply enter and select numerical data in tab-delimited form in one of the four applications, hit a user-configurable Cheshire hot key and double-click on the desired chart type. A thumbnail preview of the chart is then displayed within the Cheshire dialog; if it is acceptable, a click on the OK button automatically pastes it into the document.

Alternatively, users may enter the numbers directly into the Cheshire window to create their charts. In all but MacDraw II, the underlying numbers are saved with the chart, so it can be edited later by recalling Cheshire.

The program, which will be priced at $125, is intended for everyday business memos and reports, rather than for elaborate presentation graphics, Abbott said. While Cheshire's Options dialog lets users control the font, size and style of text, add background shading or drop shadows, transpose rows and columns, and set several other parameters, the program does not support color nor offer many of the other features of dedicated charting applications and presentation spreadsheets.

Underlying Cheshire is an engine that can support other applications and additional Clipboard-based functions, besides charting, in the future, the company said. New tools need only be dragged into the Cheshire folder within the System folder. Abbott said it plans to publish specifications and a developer kit to help third parties generate new modules for use with the program.

Abbott Systems Inc. is located at 62 Mountain Road, Pleasantville, N.Y. 10570; (914) 747-3116; (800) 552-9157. □



Cheshire, a new pop-up utility from Abbott Systems, will let users of Microsoft Word, Claris' MacWrite II and MacDraw, and Aldus PageMaker (shown here) turn numerical data into any of 21 black-and-white chart types.

PacerLink ported to Unix platform

By Margie Wylie

La Jolla, Calif. — Pacer Software Inc. this month released versions of its PacerLink terminal-emulation package for Unix platforms from Hewlett-Packard Co. and six other vendors.

Previously available for VAX/VMS and Ultrix, PacerLink mimics VT100 or VT220 terminals. The new HP version will allow that company's Unix workstations and minicomputers, including the HP 9000 Series 300 and 800 and Apollo workstations, to act as network servers for up to 200 Mac users.

Other newly supported platforms are Data General Corp.'s AViiON, Interactive Systems Corp.'s Unix for the Intel 80386/80486, the NCR Tower, the MIPS RISComputer, the Sequent Symmetry and the Sun 3/4.

The other two products in the Pacer suite — PacerShare, an AFP (AppleTalk Filing Protocol)-compatible file server, and PacerPrint, a print-spooling and management program — are expected for HP, Sun and Data General Unix systems in the next three to four months. Support for the remaining platforms will follow.

Pacer will sell and support the products directly. PacerLink, which starts at $1,200 per Unix server, is available now. PacerShare and PacerPrint for the Unix servers will start at $1,200 and $1,000, respectively.

PacerLink works with Ethernet and asynchronous physical connections as well as with LocalTalk bridged to Ethernet.

Pacer Software Inc. is at 7911 Herschel Ave., Suite 402, La Jolla, Calif. 92037; (619) 454-0565. □

Carbon Copy NetPack: 15 nodes for $999

By Carolyn Said

Norwood, Mass. — Small businesses and corporate workgroups can save a bundle on remote-control and network-management software with Carbon Copy Mac NetPack, a network version of the Carbon Copy Mac package from Microcom Software Division.

Priced at $999 for 15 nodes, or $67 per Mac, NetPack offers significant savings compared with Carbon Copy Mac's price of $299 for a twin pack, Microcom said.

The only functional difference between NetPack and Carbon Copy Mac is that only two of each NetPack's 15 nodes support remote connectivity via modem as well as AppleTalk LAN links, whereas both nodes in the Carbon Copy Mac twin pack work over a modem or AppleTalk. The other 13 copies of the program in the new NetPack support only AppleTalk connectivity.

Combining many capabilities of Farallon Computing Inc.'s Timbuktu and Timbuktu/Remote, Carbon Copy Mac lets a user monitor and control another Mac via a window showing the remote Mac screen. Users can exchange files in the background. The program has several levels of security, including password protection, the capability to enable or disable file transfer, and "need approval" access.

Microcom Software Division is at 500 River Ridge Drive, Norwood, Mass. 02062-5028; (617) 551-1000. □

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LabVIEW 2 gets runtime version

By Rochelle Garner

Austin, Texas — National Instruments Corp. will announce this week a runtime version of its LabVIEW 2 software for programming and controlling lab instruments.

Due in September for $495, LabVIEW Run-Time will offer an economical way for users to run sophisticated applications created by in-house developers and value-added resellers with National's $1,995 LabVIEW program. Instead of buying the full program for each user, managers can now buy only the runtime module for users who don't do their own programming. The runtime version requires 2 Mbytes of RAM.

Separately, LabVIEW announced the formation of its University DSP Educational Discount program, which offers substantial discounts on the company's digital signal processing (DSP) hardware and software. Discounts include the NB-DSP2300 processor board with 32 kilowords and Developer Toolkit for $2,995, or 60 percent off the $7,495 list price. The board with 64 kilowords will be $3,395, down from $8,295.

National Instruments Corp. is located at 6504 Bridge Point Parkway, Austin, Texas 78730; (512) 794-0100. □

Bobcat offers two-way link to Mentor stations

By Rochelle Garner

Wayne, Pa. — Bobcat Systems Inc. recently upgraded its McBridge program, which links the company's McLogic schematic-capture program with dedicated electronic design systems to provide two-way transfer of information to Mentor Graphics Corp.'s workstations.

Previously, the $4,995 McBridge could send information only from McLogic to the Mentor Graphics system. Now users can download Mentor results into their Macs, then paste that information into Mac-based productivity applications, such as spreadsheets and desktop publishing programs. In addition to links to Mentor Graphics' systems, McBridge provides a bidirectional interface to Valid Logic Systems' workstations and supports the electronic data interchange format.

In a separate announcement, Bobcat introduced McLogic Toolkit, a $3,495 bundling of the company's schematic-capture program with its McFormat data formatter and McSymbol library editor applications. The package represents a $500 savings over the programs sold separately.

Bobcat is at 900 W. Valley Road, Suite 204, Wayne, Pa. 19087; (215) 975-0690. □

MacServe logs off; users invited to Sitka

Portland, Ore. — Sales and support for MacServe, the AppleTalk networking product from Infosphere Inc., will be discontinued Aug. 31, the company said.

Until that date, users of MacServe, a pioneering networking product when it was introduced in 1986, can upgrade to Sitka Corp.'s Network Bundle for Macintosh for $150.

Like MacServe, Network Bundle for Macintosh offers distributed server networking and desk accessory access. In addition, it has advanced background file serving, electronic-mail capabilities with Sitka's InBox, and connectivity to MS-DOS and Unix platforms.

Infosphere, based here, last month sold its Liaison network-routing and remote dial-in technology to Farallon Computing Inc. of Emeryville, Calif.

Sitka Corp. (formerly TOPS Corp.) is at 950 Marina Village Parkway, Alameda, Calif. 94501; (415) 769-9669. □

Toshiba laptops get net cards

Alameda, Calif. — Mac users who take a high-end Toshiba laptop on the road may now be able to connect to AppleTalk networks with FlashCard Toshiba, a $329 network interface card available from Sitka Corp. (formerly TOPS Corp.).

The card fits into the special 16-bit Toshiba Adaptor in the T1600, T3100SX, T3200SX, T5100 and T5200 models. Used with Sitka's Network Bundle for DOS, the card lets users of the popular MS-DOS-based portables share files and data with Macs and Sun workstations on AppleTalk networks, send and receive electronic mail, and print to Apple LaserWriters and printers designed for use with IBM PCs and compatibles on the network.

Sitka Corp. is at 950 Marina Village Parkway, Alameda, Calif. 94501; (415) 769-9669. □

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Farallon takes MediaTracks on road

By Connie Guglielmo

Berkeley, Calif. — Four months behind schedule, Farallon Computing Inc. last week started shipping MediaTracks, its screen-recording and presentation software.

Announced in February (see MacWEEK, Feb. 27), MediaTracks combines a new version of Farallon's ScreenRecorder with a point-and-click editing system for designing training "tapes."

The program is bundled with the ScreenRecorder 2.0 desk accessory, which records Mac screen sessions (essentially, all mouse and cursor movements). The resulting tapes can then be edited with the MediaTracks editor and annotated with digitized sound using Farallon's $249 MacRecorder Sound System. Although MediaTracks records only in black and white, tapes can be enhanced with text or draw objects in eight colors and with color PICT images imported through the Scrapbook.

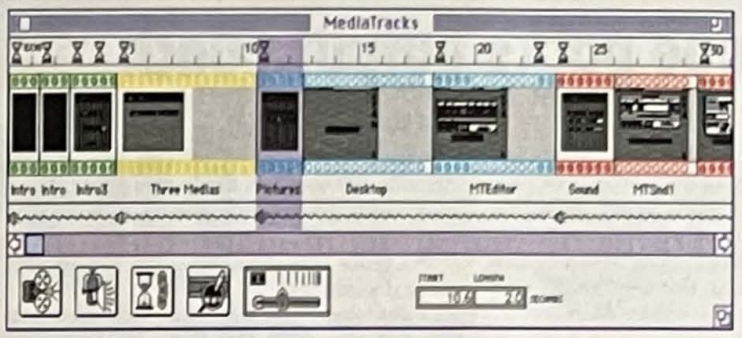
"It is the only application that I know of where you can record what's going on on the screen, add narration to the recording and sync things up," said Larry Fisher, a technical instructional designer with Apple's Developer University. The group is using MediaTracks to supplement a training course that it is developing for release in October called "Macintosh Programming Fundamentals — Self Paced."

"We have a totally animated, fully narrated Mac programming course that we put together with MacroMind Director," Fisher said. "As part of the course, students have to do a lab where they develop a graphics editor. We've put together a series of MediaTracks tapes that shows an expert going through the steps of the lab. The tapes are important because they allow students to go back and see where they've made mistakes."

MediaTracks, which runs on any Macintosh with 1 Mbyte of RAM, is available in three packages. MediaTracks, including the ScreenRecorder 2.0 DA, a tape editor and a runtime player for distributing tapes royalty-free, is $295. MediaTracks Multimedia Pack ($495) includes the MediaTracks package and the MacRecorder Sound System. A CD-ROM version of the pack also is $495.

ScreenRecorder owners can upgrade to MediaTracks for $50 or to the Multimedia Pack for $245.

Farallon Computing Inc. is located at 2000 Powell St., Suite 600, Emeryville, Calif. 94608; (415) 596-9100. □



MediaTracks, which includes an improved version of Farallon's ScreenRecorder and an editor, lets users assemble training tapes of screen sessions. Screens can be annotated with color text and with color images imported through the Scrapbook.

Vector adds U.S. support, $2,300 to MacRoad 3.5

Fort Wayne, Ind. — Only a month after Creative Engineering Inc. released Version 3.01 of its MacRoad DTM civil-engineering software for $1,700, Vector Systems/MicroConcepts took over distribution and began marketing Version 3.5 for $4,000.

Creative Engineering, based in Australia, will no longer handle North American distribution. Vector Systems said it will honor the $1,700 price quoted to companies that have already been in touch with Creative Engineering.

The new price includes U.S. support. Previously, all support questions were referred to Creative Engineering's Australian office. In addition, Version 3.5 offers faster screen redraw than the earlier release, according to Vector. Calculating triangulation (determining contours) as well as cut and fill (amount of earth dug out or filled in) is also more accurate and faster, the company said.

Vector Systems/MicroConcepts is located at 3700 Vanguard Drive, Suite A, Airport Pyramid Center, Fort Wayne, Ind. 46809; (219) 478-8088. □

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FCC certified design	yes	yes
Apple-standard footprint	yes	yes
ABS plastic case	yes	yes
Apple-standard platinum color	yes	yes
2-color read/write indicator	no	yes
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800K capacity	yes	yes
1.44 MEG SuperDrive capacity	yes	yes
One year warranty	yes	yes
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DynoPage packs output punch

By Henry Norr

Rhinebeck, N.Y. — Portfolio Systems Inc., developer of the DynoDex address-book package, last month announced DynoPage, a printer utility that brings output options Portfolio pioneered in DynoDex to other Mac programs.

Due in September, the new $99.95 Control Panel device (cdev) will let users:

- Preview and print any document on personal organizer-size paper. The package will include 100 sheets of the special paper.
- Easily generate double-sided output of any file on regular paper.
- Create thumbnail reductions of multipage documents.
- Use custom page sizes.

Portfolio last month also began shipping Version 1.2 of DynoDex, featuring a one-third price reduction (to $99.95), a $25 coupon for FiloFax merchandise, and a new desk accessory that lets users access and add to DynoDex files even when the application is not running. Other enhancements include 5-Kbyte note fields and new commands for copying and pasting whole records.

Portfolio Systems Inc. is now located at 21 E. Market St., Rhinebeck, N.Y. 12572; (914) 876-7744. □

MacTel adds mirroring, A/UX support to driver

By Henry Norr

Austin, Texas — MacTel Technology Corp. last week moved to distinguish its Index hard drive line from its competitors in the direct-sales market by announcing an improved driver that supports disk mirroring, partitioning, and A/UX and ProDOS support.

MacTel, a direct-sales vendor of storage systems, memory and other Macintosh add-ons, offers a line of Seagate and Quantum drives, ranging from a 20-Mbyte Seagate internal drive priced at $279 to a 600-Mbyte Seagate Imprimis unit priced at $1,999 (internal) or $2,250 (external). The company's SyQuest removable-cartridge model is $669, including one cartridge.

With the new disk-mirroring feature turned on, the Index driver automatically writes data saved to a primary drive to another volume of identical capacity; if the first drive fails, the user or network administrator can simply mount the second without losing recent data or the time required for restoring from a tape or floppy backup.

Storage Dimensions of San Jose, Calif., last month announced a similar capability for its MacinStor drive line (see MacWEEK, July 31). The MacinStor software, however, automatically switches to the secondary drive in the event the primary unit fails, the company said; users of the MacTel drives must run the company's Index utility to mount the duplicate drive.

Other new driver features include an option to update the disk driver without reinitializing the drive, and the Apple HD Format Option, which lets the user set up the drive as if formatted by Apple's utility.

Also bundled with the Index drives are BackMatic, the $99.95 automatic backup utility from Magic Software Inc. of Bellevue, Neb.; AutoSave II, a $49.95 Magic utility that automatically saves open documents at user-specified intervals; and 14 Mbytes of publicly distributed software.

MacTel Technology Corp. is located at 3007 N. Lamar, Austin, Texas 78705; (512) 451-2600; (800) 950-8411. □

Storage Dimensions bundles MacTools Deluxe

San Jose, Calif. — Storage Dimensions this month will begin bundling MacTools Deluxe, the new utility collection from Central Point Software Inc., with all Storage Dimensions drives.

The $129 package, released in late June and since updated to fix several bugs, includes backup and optimization applications and several disk- and file-recovery tools, including a Control Panel device (cdev) that makes it possible to examine and recover recently deleted files from within any application (see review, Page 118).

Storage Dimensions, a subsidiary of Maxtor Corp., offers subsystems ranging in capacity from 40 Mbytes to 2 Gbytes. Version 3.0 of the company's installer utility features new disk-mirroring and disk-spanning capabilities (see MacWEEK, July 31).

Storage Dimensions is located at 2145 Hamilton Ave., San Jose, Calif. 95125; (408) 879-0300. □

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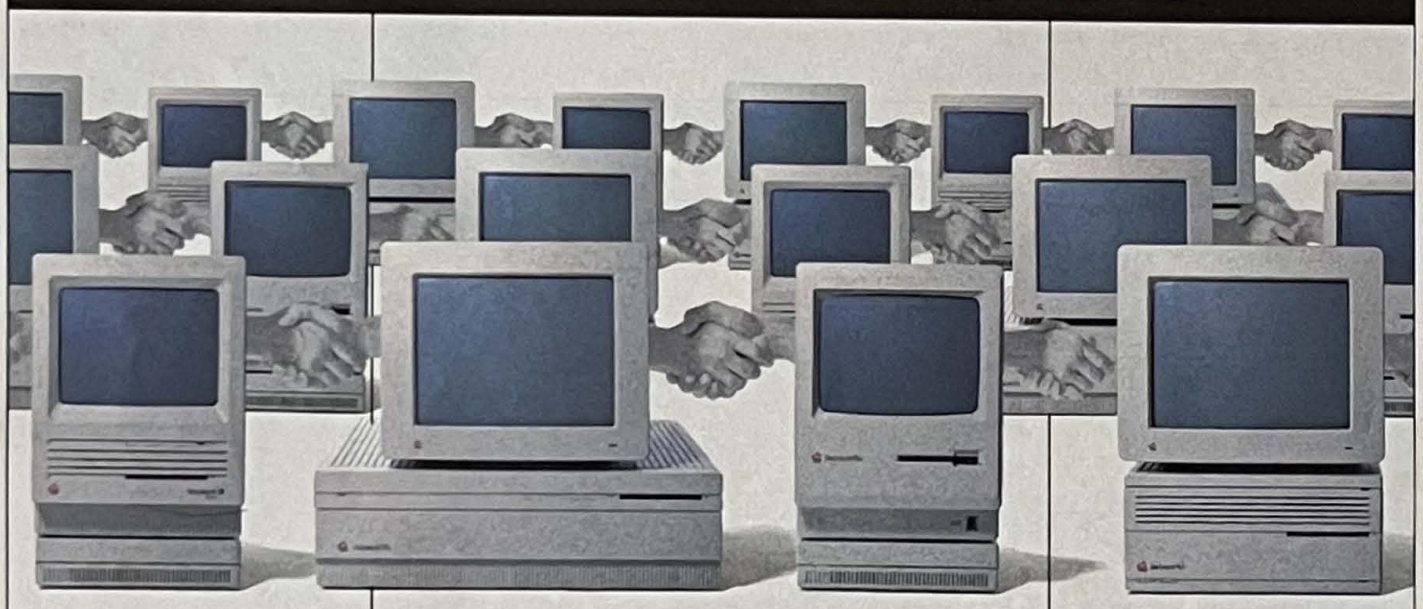

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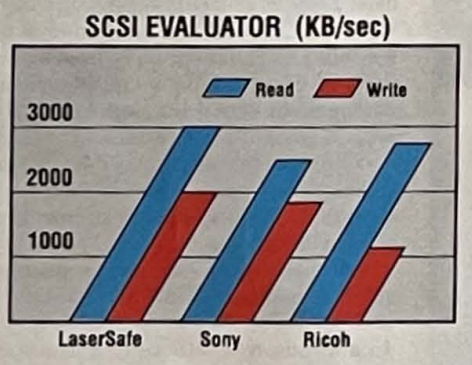
With the new LaserSafe, a fast MO is no longer an optical illusion. In addition to a 256KB, on-board, dual-ported caching system, LaserSafe utilizes an advanced technique called "asynchronous write." By freeing the Mac from waiting for the write operation, LaserSafe can nearly double your throughput. An Iomega first that raises the level of MO performance, making LaserSafe the fastest MO for your data-intensive storage applications. The difference is clearly visible.

The LaserSafe is a 650MB optical drive that's actually easy to use, too. It allows you to partition disks for easier file management. And it's the first MO that gives you off-line disk formatting, saving you up to 40 minutes per disk of otherwise wasted time. But more important, LaserSafe uses the same simple software interface for which Bernoulli is known.



LaserSafe was designed with an attention to detail unlike any other MO. Worldwide agency approvals, a sealed mechanism and positive airflow filtration set the industry standard for reliability and data integrity. And LaserSafe has convenient, external termination, 110/220 voltage switching

and SCSI ID — no panels to open, no resistors to remove, no hassles.

Above all, LaserSafe is made by the company that wrote the book on removable storage. The company that has an installed base of over 600,000 drives with 98 percent customer satisfaction. A company that will be there to support you in the future.

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Group to make SPLAsh expo debut

By Henry Norr

Cupertino, Calif. — The Symantec Programming Languages Association (SPLAsh), an organization for users of Symantec Corp.'s Think languages, will get off the ground Aug. 9 with an ice-cream social at the Boston Computer Museum from 6 p.m. to 8 p.m. All users of Think C and Think Pascal are invited.

Designed to "stimulate the exchange of ideas and information" about programming techniques, SPLAsh was organized by Gregory H. Dow, a consultant and developer of the Think Class Library, distributed with current versions of both languages. Dow is also the leader of the programmers group at BMUG, the Berkeley, Calif.-based Mac user group, and secretary-treasurer of that organization.

Members of SPLAsh will receive a subscription to a quarterly newsletter called Thinkin' CaP, featuring product reviews, technical tips and articles, and a disk of code, such as new classes and "code gadgets," Dow said.

"Members will be free to use any source code we distribute in their applications, whether shareware or commercial," Dow said. "Our goal is to supply information in a usable and practical format."

Symantec Corp., which last month endorsed Dow's efforts, will sponsor this week's social and include membership applications in a mailing going next month to all registered owners of Think C and Think Pascal. Otherwise, Dow said, SPLAsh will be independent of Symantec.

Annual membership will be $30 in the United States, $40 in Canada and Mexico, and $60 elsewhere.

SPLAsh is at 1678 Shattuck Ave., Suite 302, Berkeley, Calif. 94709; (415) 527-0122. □

CrystalPrint Express outputs 12 ppm

By Pamela Pfiffner

Milpitas, Calif. — Having established itself as a leader in printer performance with its 6-page-per-minute CrystalPrint Publisher series, Qume Corp. is seeking to break new ground with a 12-ppm model, the CrystalPrint Express.

Available now for $5,595, the Express is a PostScript-compatible printer that supports Adobe Type 1 fonts. The printer, which uses Qume's own interpreter, comes with 39 Bitstream fonts.

The printer's resident resolution is 300 dpi, but Qume's enhancement technology boosts resolution to 600 by 300 dpi by doubling the number of horizontal dots. The Express' firmware also supports bit-map smoothing, a feature of Apple's LaserWriter driver that not all laser printers take advantage of, Qume said.

The Express is based on the same 32-bit Weitek XL-8200 RISC (reduced instruction set computing) processor used in Qume's recently released CrystalPrint Publisher II. With a dual page buffer and 3 Mbytes of RAM, which can be expanded in 1-Mbyte increments to 8 Mbytes, the unit prints at close to its 12-ppm rating, Qume said.

According to Qume, the PostScript "spiral" benchmark printed in just 28 seconds on the Express, compared with eight minutes on the Apple LaserWriter NT and three minutes on the LaserWriter NTX.

Beta-tester Bob Hood, vice president and chief financial officer at Pillar Corp. of Foster City, Calif., agreed that the printer is noticeably faster than most printers, even in the 600-dpi mode. In terms of print quality, he said, the new printer's output is superior to that of the original CrystalPrint Publisher. "The blacks are equal and the fine lines are better," he said.

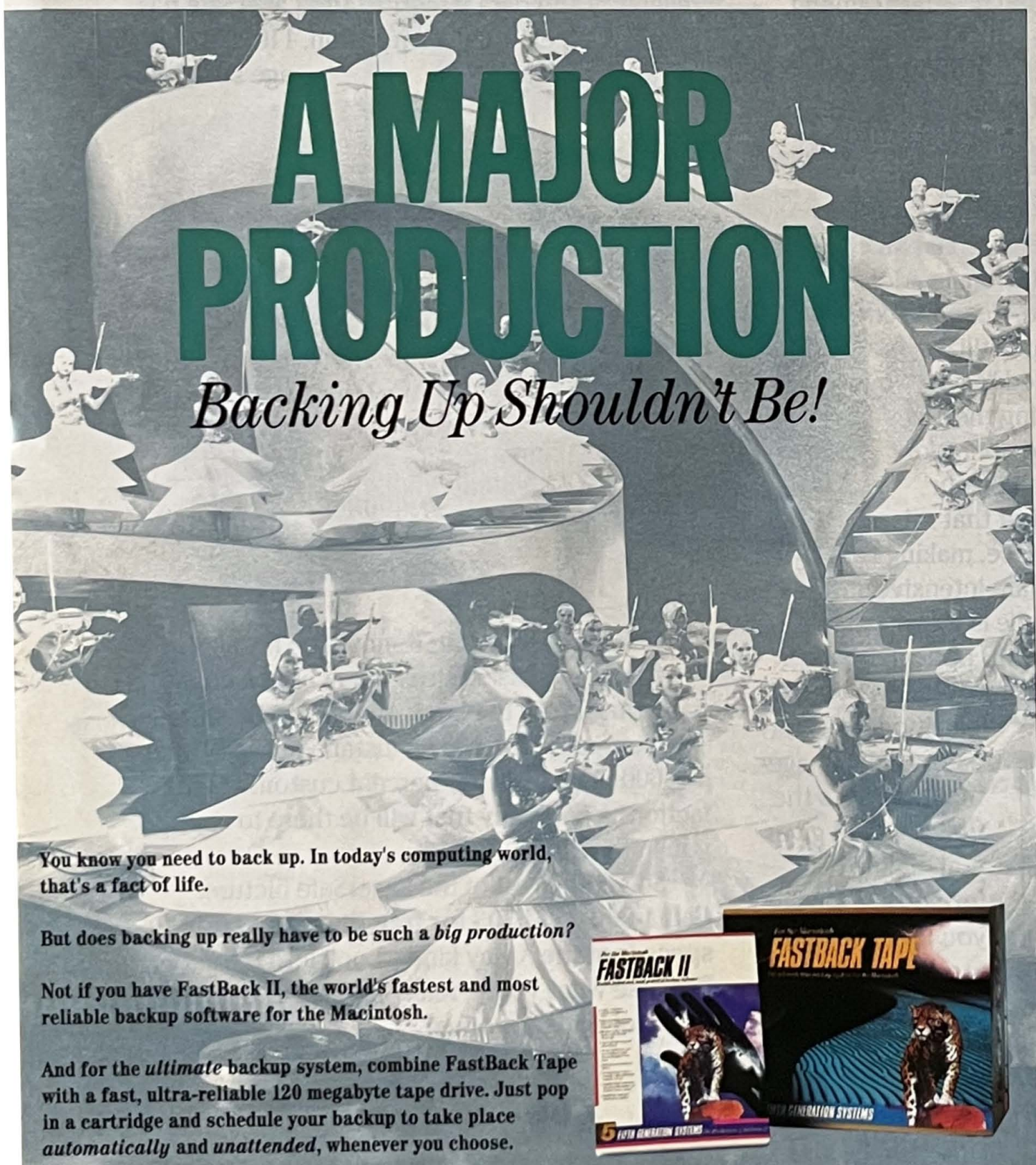
The printer's Sanyo SPX-612 engine has a duty cycle of 10,000 pages per month, or a total of 600,000.

For use in mixed environments, the Express sports RS-232C and RS-422A serial and parallel as well as AppleTalk interfaces. In addition to PostScript, it also includes Hewlett-Packard Co.'s LaserJet Series II emulation with 31 scalable HP LaserJet II fonts. The Express can switch automatically between emulations, eliminating the need to manually change mode configuration.

The unit, covered by a one-year warranty, also has a slot for an Integrated Code Cartridge, which allows for future emulation upgrades, such as PCL 5.

The Express comes equipped with two 250-sheet letter-size paper trays. Legal and A4 cassettes are available separately. Printer software also includes a Startup document (INIT) that lets users select which paper tray to print to so they can combine letterhead and plain paper in the same print job.

Qume Corp. is at 500 Yosemite Drive, Milpitas, Calif. 95035; (408) 942-4000. □



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Microtech adds really big drives to Nova line

New models in Microtech International's Nova hard drive line

Internal Model	Capacity (Mbytes)	Mechanism	Size (inches)	Price	External Model	Capacity (Mbytes)	Mechanism	Size (inches)	Price
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N170i	170	Quantum	3.5	$1,399	N170	170	Quantum	3.5	$1,499
N200i	200	Quantum	3.5	$1,499	N200	200	Quantum	3.5	$1,699
N400i	400	Seagate Imprimis	5.25	$2,299	N400	400	Seagate Imprimis	5.25	$2,599
N1200i	1,200	Micropolis	5.25	$4,599	N650	650	Micropolis	5.25	$3,999
					N1200	1,200	Micropolis	5.25	$4,899

By Henry Norr

East Haven, Conn. — Microtech International Inc. is adding a slew of new models ranging in capacity from 120 Mbytes to 1.2 Gbytes to its popular Nova hard drive line.

Highlighting the lineup of new models will be a 1.2-Gbyte internal drive for the Mac II, IIx and IIfx. The N1200i, using a 5.25-inch full-height Micropolis mechanism, will be $4,599; a $4,899 external equivalent works with all Macs. Both are scheduled for delivery later this month.

The N650, a $3,999 external 650-Mbyte drive with a Micropolis mechanism, is due to go on sale at this week's Macworld Expo, Microtech said. The company announced an internal version, the N650i, for $3,430 in April.

A 400-Mbyte addition to the Nova line, using a half-height 5.25-inch Seagate Imprimis mechanism, is also due at the expo. The N400i, an internal version for six-slot Macs, will be $2,299, while an external model for all Macs will be $2,599.

Last month the company also began shipping new internal and external Quantum drives in capacities of 120, 170 and 200 Mbytes (see chart, above right).

All the drives are covered by Microtech's industry-leading five-year warranty. They are bundled with the new Norton Utilities for the Macintosh; Total Recall, a backup utility from Centa Systems; and a collection of shareware, public-domain and demo programs.

Microtech International Inc. is located at 158 Commerce St., East Haven, Conn. 06512; (203) 468-6223. □

Who you gonna call? Ask new Mac book

Berkeley, Calif. — What do you do when your Mac presents an error message? As every experienced user knows, more often than not the only choice is clicking "OK."

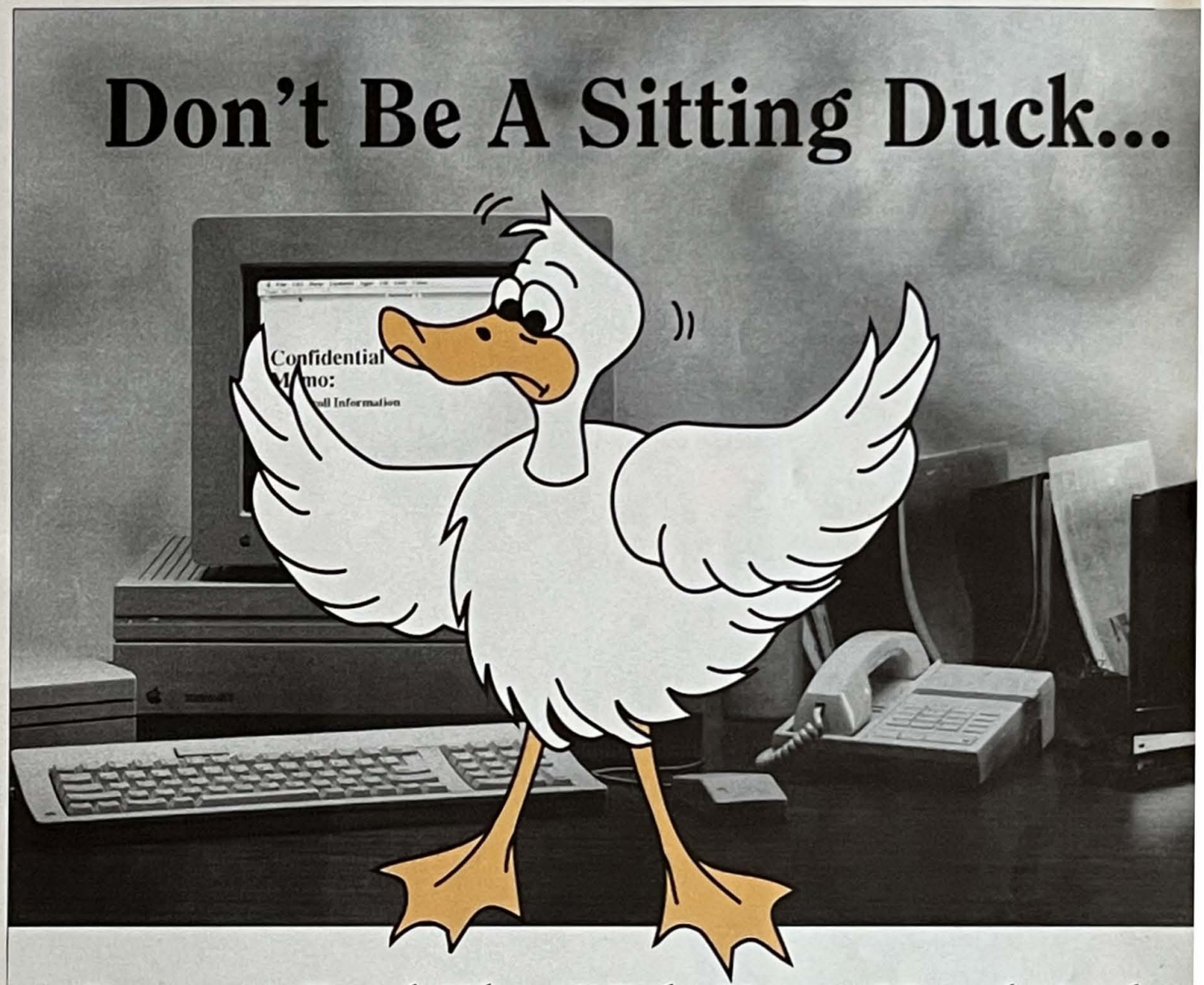
But sometimes you do have a choice and, anyway, it's good to know just what those cryptic messages mean and what you can do to keep them out of sight in the future. That's where "The Macintosh Bible 'What Do I Do Now?' Book" promises to help.

Subtitled "What to Do Instead of Panicking," the 191-page book provides explanations of scores of common and uncommon error messages, along with a review of basic Mac procedures and ways of staying out of trouble.

The new book was written by Charles Rubin, author of nine other computer books as well as articles in MacWEEK and other magazines. Goldstein & Blair, publisher of the " 'What Do I Do Now?' Book," also published the best-selling "Macintosh Bible."

The " 'What Do I Do Now?' Book" has a retail price of $12 and comes with a 30-day money-back guarantee. It is available direct from the publisher for $15, including shipping and handling.

Goldstein & Blair can be reached at P.O. Box 7635, Berkeley, Calif. 94707; (415) 524-4000. □



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Siclone caches in: IIci SRAM card

By Henry Norr

San Jose, Calif. — Siclone Sales & Engineering Corp. will this month become at least the fourth company offering a cache card for the Mac IIci.

Siclone's CiCache, priced at $699, incorporates 64 Kbytes of 25-nanosecond static RAM. The card, which plugs into the IIci's special cache connector, improves performance in some applications by providing the machine's 68030 processor with extra-fast access to recently used data.

The price leader in the IIci cache-card market is UR Micro Inc. of Williamsville, N.Y., which offers its MacCache with 64 Kbytes of SRAM for $549. The pioneer in the field is DayStar Digital Inc. of Flowery Branch, Ga., which offers its 64-Kbyte Fast Cache IIci for $869, while Boise, Idaho-based Micron Technology Inc. holds the distinction of offering the largest cache: Its $795 Xceed IIci-128 card comes with 128 Kbytes of SRAM.

When the IIci was announced almost a year ago, Apple said it would offer its own cache card but has not yet done so.

Siclone Sales & Engineering Corp. is located at 107 Bonaventura Drive, San Jose, Calif. 95134; (408) 456-5060; (800) 767-8207. □

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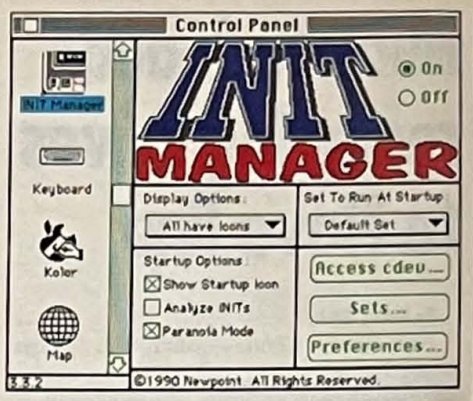

INIT Manager, Baseline Publishing's new entry in the INIT-management software derby, delivers detailed technical reports about system configuration and Startup documents. The Access cdev button lets users control cdevs stored in a System folder subfolder.

Baseline seeks niche with INIT Manager

By Henry Norr

Memphis, Tenn. — Commercial and shareware INIT-management utilities have proliferated almost as fast in the Macintosh world as the Startup documents (INITs) themselves. But just as power users keep adding more of the miniprograms to their System folders, Baseline Publishing Inc. believes there is room for one more manager on the market.

Like its competitors, Baseline's $59.95 utility, appropriately called INIT Manager, lets users turn INITs on or off on start-up or from the Control Panel. It also makes it possible to change the order in which the sometimes-sensitive programs load, without renaming them, and to save and launch sets of INITs for particular purposes.

Like the BombGuard feature in INITpicker 2.0 from Microseeds Publishing Inc., INIT Manager's Damage Control option can automatically flag and disable INITs that cause crashes during start-up.

INIT Manager's most distinguishing feature is its technical reporting, a capability available with several shareware utilities but not in any of the current commercial entrants in the field.

In addition to basic system configuration information, the program can be set to record information about the memory used by INITs, the time required to load them and the traps they patch, and other data. Advanced users, support personnel and Programmers can use the information to understand the effect of various INITs and trace the source of problems.

Another notable feature in the Baseline program is an option to place INITs and Control Panel devices (cdevs) in a subfolder to reduce System folder clutter. The program also is capable of running INITs outside the System folder.

INIT Manager will be available at this week's Macworld Expo, Baseline said, along with three other programs in the company's MacPAKS series: ExpressTape, the Talking Moose and Color MacCheese. Another product originally scheduled for release this month, a desk accessory spreadsheet and forms generator called 1 Shot Worksheet, is now expected in September.

Baseline Publishing Inc. is located at 5100 Poplar Ave., Suite 527, Memphis, Tenn. 38137; (901) 682-9676; (800) 926-9676. □

New Media STEVE ROSENTHAL

New technology in pursuit of video mastery

I just spent a few hours editing videotape with one of the first popularly priced video controllers for the Mac, and I'm impressed — with its potential.

The $599 Video Master from VENT Inc. of Mountain View, Calif., is certainly a good start. But it also highlights the difficulties of linking the Mac to the current generation of low-cost video gear. You *can* get presentable results, but it still takes a lot of time and effort.

The Video Master is basically a combination computer-controlled video router that switches any of four input video/audio pairs to either of two output pairs and a computer-controlled six-output infrared remote control that can learn and mimic the output of most common infrared devices.

The Video Master passes control and status information to and from the Mac through the normal serial phone port. The video and audio switching is done inside the Video Master so you don't need special video hardware.

The control signals from the Video Master to video decks or other sources are emitted in infrared form by small "wands" that are placed in front of each piece of equipment. Switching is limited to cuts between sources. There are no special effects, overlays or transitions aside from adding black periods during crossovers.

Admittedly, that does limit what you can do with the unit. If you're thinking of producing full-blown cinematic video or complex instructional tapes with simulations or special effects, you'll need a lot more than just this box. But if you're willing to start with simple "cuts-only" video, which is how most video news reports, interviews and non-computer demonstrations are done, this type of simple switching unit may be for you.

In this case, though, it helps if you're an accomplished HyperCard or MacroMind Director hacker. VENT provides the hardware, but the only software included is a utility program that lets you teach the system the patterns of your existing remote controls, external commands (XCMDs for HyperCard and XObjects for Director) for controlling the box, and a simple HyperCard-based editor.

If you're developing a multimedia presentation — and in many ways the unit is more suited for real-time switching between inputs such as videodiscs, videotape and other NTSC (National Television System Committee) video sources from a Mac during a presentation — the software may be enough. Teach the unit the play and stop codes for each device, whip up a quick stack or Director movie, and invoke the codes at the appropriate time.

But editing is a lot more complex. Video editing relies on direct interaction with the user, many changes in tape speed and direction, and split-second timing. Making that process easier requires some sophisticated software.

To locate an edit point, you need to be able to switch from forward to reverse, from full speed to single-frame. When you make an actual edit from one machine to another, both must be started in advance ("pre-roll") to ensure they're up to full speed at the edit point.

Controlling consumer decks can be made more complex by the "smart" characteristics of the equipment. Instead of a one-to-one correspondence between remote commands and device operations, most consumer devices have processors that turn single commands into sequences of events. Some controls may do double or even triple duty: A fast-forward button on a video deck or CD player may mean scan forward if the unit is already in pause or play mode. Software for editing may have to outsmart these built-in functions.

VENT's sample stack does provide back and forth control and pre-roll, but it doesn't understand complex sequences or on-off buttons. Consequently, it works much better with simple 8mm decks such as Sony's $350 EV-C3 than with complex VHS or Super VHS decks.

I suspect real video hackers will want to write their own stacks or wait for someone else to make one available. I've started on mine.

The Video Master isn't the "VideoWriter," the mythical video counterpart of a laser printer. But at its price and performance point, maybe we could at least call it a first shot at the "VideoImageWriter." □

Send tips and comments to Steve Rosenthal, c/o MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105; AppleLink: Steve.R; MCI: 114-8611.

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StackWEEK STEVE MICHEL

Some thoughts on HyperCard 2.0

PRODUCTS & NEWS

In last week's column, we discussed Silicon Beach Software's SuperCard 1.5, wondering how it would fare during the wait for HyperCard 2.0 and especially after Apple's release of that product. For now, we don't know exactly *when* HyperCard 2.0 will be released. When announced last month, the program was to ship in July, but the month has now come and gone. Apple employees on CompuServe and other forums have offered only the entirely reasonable (but nonetheless frustrating) explanation that "it will ship when it is finished." Nevertheless, a number of details have been released to the public through various sources, and it seems fair to comment on them.

A wealth of new features. First, HyperCard 2.0 itself will support a number of new features, few of which will be really surprising to longtime HyperCard users. As expected, the new version will remove HyperCard's limit on card sizes; cards can be as small as 64 by 64 pixels or as large as 1,280 by 1,280 pixels, memory permitting. On small monitors, scroll bars will appear at the right and bottom edges of the windows, and a handy Scroll windoid will support very fast scrolling around the card window using a grabber-hand cursor. Since the size of a card is a property of the stack, all cards in a stack are the same size, but the window size can be changed dynamically under script control.

HyperCard 2.0 also will let you have several stacks open at the same time in different windows. The Open dialog box includes a check box that lets you specify whether the stack is to be opened in a new window or to replace the current stack in the same window. Scripts, too, will have control over opening stacks in different windows.

Since HyperCard has been used as a medium for presenting large quantities of text, it has been a real nuisance that all the text in a field had to be in the same font and style. This is remedied in HyperCard 2.0; you will have the full range of Macintosh style settings to choose from for any chunk of text in any field. As with all the changes to HyperCard, this will be fully supported in HyperTalk; statements such as "set the textstyle of word 4 of field 7 to bold" will now work.

A new series of functions, including clickLine, clickWord and clickText, will at last make it possible to create genuine hypertext applications, allowing something to happen when a user clicks on text within a text field.

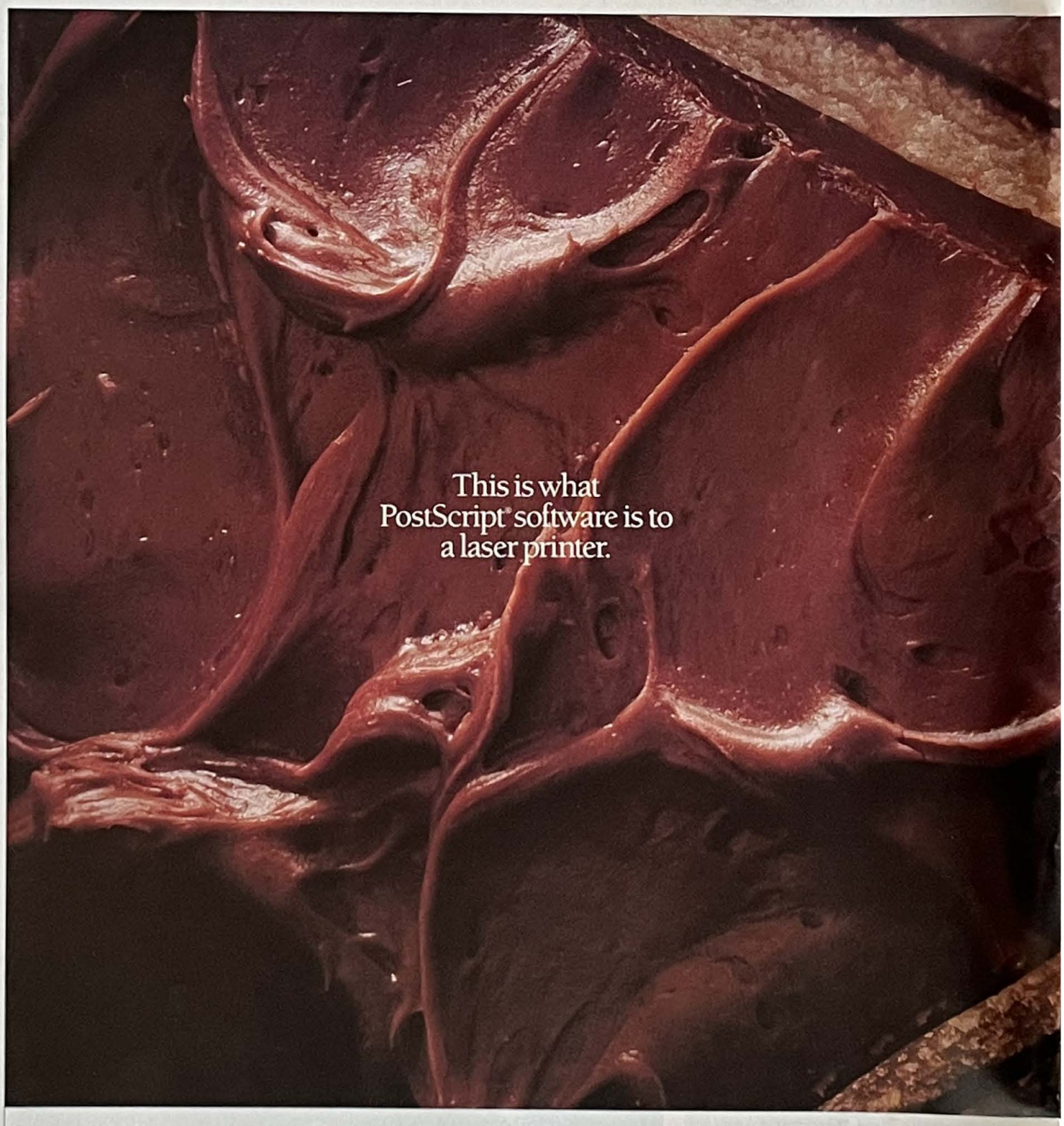
Creation of complex projects also will be greatly aided by a new facility that lets you add stacks to the message hierarchy. In HyperCard 1.x, the only stack that always received messages was the Home stack. This led to bloated Home stacks, as developers placed a large number of resources — externals and handlers — into the user's Home stack.

With HyperCard 2.0, developers will have a Uses command that adds a specific stack to the hierarchy so messages are passed to this stack before reaching Home. We are very excited about this feature. It will not only make implementing multistack applications easier but also will allow for easier distribution and creation of utilities and script libraries.

HyperCard's support for color will be very limited. An XCMD called Picture will be part of HyperCard itself and will let you open, in a separate window, a PICT or MacPaint file, or PICT resource. You will be able to track mouse clicks in this window, making color development possible, although the scripting may be tedious.

For stack developers who had hoped to see color fully supported in HyperCard, the good news is that at least one developer is already planning to fill in the gap. ADDmotion, a $295 package from MotionWorks Inc. of Vancouver, British Columbia, will include a 24-bit color paint module as well as an animation module.

HyperCard 2.0 will do menus, too. A set of commands will let scripts insert and remove new menus and menu items or even HyperCard's own menus. When adding a menu



item, you can specify which message is sent when the user chooses that item and write handlers to intercept that message. This will make it much easier to create "real" Macintosh applications. You can even remove the "About HyperCard" menu item with the following statement: delete menuItem "About HyperCard..." of menu "Apple".

HyperTalk also will be much faster, thanks to script compilation. When first executed, scripts will be compiled, and the compiled version will be kept in memory temporarily for faster execution. (This does not affect Heizer Software's CompileIt!, a tool for creating externals, which is a very different function.)

This new compilation scheme is nice; not only does it make scripts faster, it makes debugging easier. Compile-time errors are caught before the script runs and are generally of the syntax-error type. Runtime errors are caught as the script runs, and they summon the wonderful debugger built into HyperCard 2.0. You also can summon the debugger from script control with a statement such as the following: if x > 5000 then debug checkpoint.

Perhaps the most exciting development in HyperCard 2.0, however, is the extended capabilities it will give XCMDs and XFCNs. Although details are still sketchy, externals will be capable of opening their own windows on the screen, and those windows will be capable of receiving mouse messages. Given that the HyperCard window can be hidden on the screen, this (along with the capability to control the menu bar) will allow developers to write applications that don't even appear to be written in HyperCard.

More to come. This discussion of HyperCard 2.0's features just scratches the surface, and as the release of 2.0 grows nearer, more details will become available. So far, the news is very exciting, and many of the new features seem to break down the "separate but equal" interface questions and problems that have beset developers working in HyperCard. With the capability to create stacks that have more of the features of standard Macintosh applications, HyperCard is coming closer to being a true applications development and prototyping platform. □

If you have any tips or other HyperCard-related information, write to StackWEEK, c/o MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105. Electronic mail: MCI: STACKWEEK; AppleLink: SMICHEL; CompuServe/ZMAC: 72511,151.

Kennect plugs new multiformat floppies

By Henry Norr

Los Gatos, Calif. — Kennect Technology, extending its line of multiformat floppy drives into the 5.25-inch realm, last month began shipping two new models.

The new products, both of which require Rapport, the company's $295 mouse-size add-on controller, are:

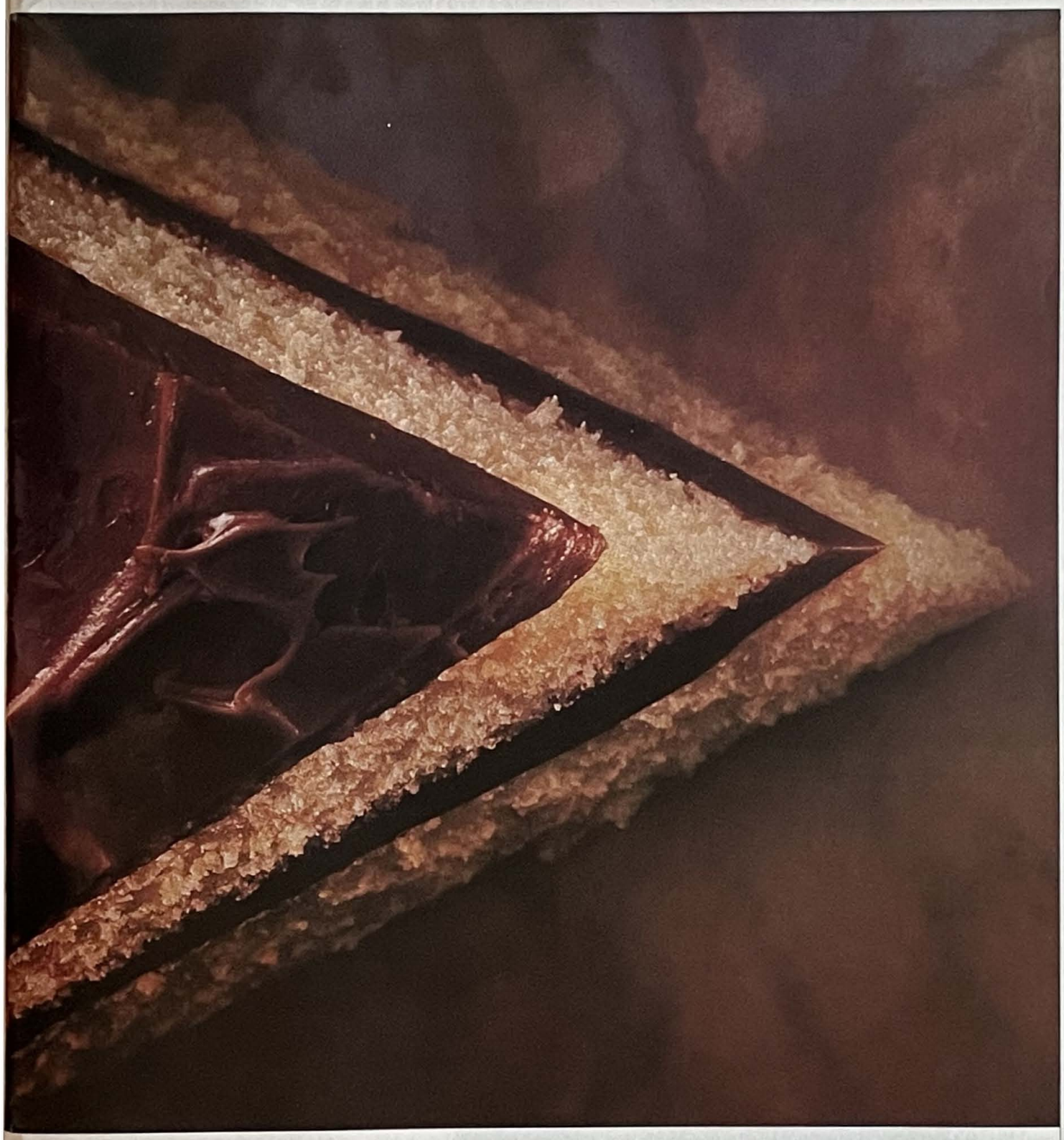
The Drive 1200. Priced at $395, the Drive 1200 reads, writes to and initializes 1.2-Mbyte 5.25-inch floppies used in IBM PC AT-class and higher machines. It also reads, but does not write to or format, 360-Kbyte MS-DOS floppies and 140-Kbyte ProDOS disks from Apple II systems.

The Drive 360. Also priced at $395, the Drive 360 reads, writes to and initializes 360-Kbyte DOS floppies and 140-Kbyte ProDOS disks.

The new models join Kennect's original external drive, the Drive 2.4, which reads, writes to and initializes all current 3.5-inch Macintosh and PC formats. The Drive 2.4 also can use a proprietary format to store 1.2 Mbytes of data on standard 800-Kbyte disks or 2.4 Mbytes on high-density floppies. It is now bundled with Fastback II, a backup utility from Fifth Generation Systems Inc., that further increases the drive's capacity with its own data-compression techniques.

Mac II and IIx owners need a special Adapter/Extender Cable, available from Kennect for $69, to connect Rapport and any of the Kennect drives.

Kennect Technology is located at 120-A Albright Way, Los Gatos, Calif. 95030; (408) 370-2866; (800) 552-1232. □



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Letters

MacWEEK ad campaign riles volume buyer

I recognize that it is necessary for you to solicit additional, ongoing advertisers to support your valuable publication, but I take strong exception to the "smear campaign" tactics that are appearing in your issues these days. MacWEEK can and does sell itself on its intrinsic quality, timeliness and value without having to resort to disparaging remarks about other Mac magazines.

I read every article and every advertisement in each issue of MacWEEK, MacUser and Macworld, and while there is often some redundancy, I find that each publication contributes significantly to my ability to help other people understand, evaluate and choose Macintosh-related products.

Yes, our organization buys Macintosh products weekly. But the decisions as to which products to buy are made carefully, in advance, and with as much information and as many perspectives as we can collect. With more than 1,000 Macintoshes already in use here, we can't responsibly buy based solely on one week's advertisements! And we would rather not buy without the combined perspectives of at least the three major Macintosh periodicals.

I look forward to reading your publication every week, and I'll keep reading it even if it contains that embarrassing smut, but how about a little more respect for your monthly peers?

Daniel Brocklebank
John Hopkins University
Laurel, Md.

The theme of the campaign was that while the others may be good, MacWEEK is regularly first out. — Ed.

Just can't get enough of that Jasmine thang

MacWEEK is a respected voice in the Mac community, but Jasmine Technologies Inc.'s financial difficulties deserve some good, tough investigative journalism. How much money did founder Dennis Chang end up with? How much was owed to each of the Mac trade magazines and other creditors? Where does Rodime Systems Inc. (the primary supplier of drives to Jasmine) stand in the whole picture?

MacWEEK should adopt the following policies:

- The technical-support performance of companies backing their products should be thoroughly researched.
- Companies that charge for items before shipping should not have their products reviewed.
- A recent, confidential company financial statement should be required from any company wishing to have its products reviewed.

Your readers deserve no less than the best when it comes to information about companies, as well as their products.

Dennis Kolva, programming director
Turtle Creek Software
Spencer, N.Y.

Just when we thought we had overdosed on Jasmine coverage ... As for your product-review recommendations, researching the technical-support performance is a standard part of the MacWEEK review process and it's certainly possible to mention whether a company requires prior payment, but financial statement disclosures of privately held companies are about as easy to come by as an honest politician. — Ed.

Why don't you take this Knife and ...?

I read with interest various articles in your tabloid regarding the Macintosh competition. The tone of your articles borders on doom and gloom for the poor and defenseless Mac with ultimate victory secured by MS-DOS. Readers can almost hear glee coming from the pens and pencils of your writers: "Death to the Mac! Long live MS-DOS."

I would like to offer some observations: First, if Apple were to die this very night, what the hell would happen to the likes of you? Don't you realize who butters your bread? Second, what would happen to innovation? You and the rest of the computing world can point to little that wasn't first implemented by Apple. For example, where did the idea for Windows come from? Not from MS-DOS.

You feign objectivity, but you do little more than report facts and give great evidence that you do not understand the implications of the facts you report. The Macintosh deserves more from the tabloids that lie in its wake. You add nothing to the world of computing and are little more than its detractors. You should read some of the Apple II tabloids and learn from them. Even when there was good reason for the Apple II users to be upset with Apple or the Apple II platform, they still wrote like they were in love. You, on the other hand, write like prostitutes.

Why don't you take Mac the Knife and disembowel yourselves and let someone write who understands and appreciates the Mac?

T. Eric Paulson
Deephaven, Minn.

Pens and pencils? Actually, MacWEEK is staffed by a coven of CP/M heads. — Ed.

Fallout from the high risk of low-cost drives

Loopholes in corporate business law continue to amaze me. The owner of a company entering bankruptcy can form a second company to purchase only the assets of the failing company, ignoring the original company's liabilities. This appears to be the approach taken by Chris Lemoine, founder of now-defunct hard disk vendor Crate Technology Inc. (MacWEEK, June 12). His new company, Data Storage Development Inc., bought the assets of Crate with the intent to continue to sell drives under the Crate label while taking no formal responsibility for the company's liabilities.

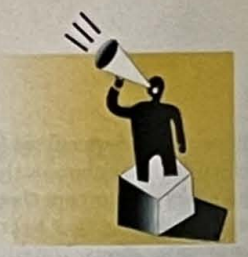
MacWEEK quoted Lemoine as saying that the new company will honor the old one's warranty obligations, but I doubt it will ever happen. I purchased a drive directly from Crate Technology primarily based on price and its two-year warranty. I shipped my failed hard drive, still covered under its original two-year warranty, back to Crate Technology last August for repair. A year later, I'm still trying to get my drive back, despite repeated promises from Lemoine that I would.

Consumers ultimately decide the fate of such companies. Unfortunately, many of these same consumers may suffer in the process.

John DeSoi
College Station, Texas

Mr. Lemoine passed up several opportunities to reply to your complaints here. For general guidelines to mail-order hard drive purchases, see story, Page 99. — Ed.

Send letters to MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105. MCI: 323-1203; fax: (415) 243-3650. Include your name, address and phone number. We reserve the right to edit letters for clarity and length.



Editorial

The move to make the IIci mainstream

At first blush, Apple's moves to push the Mac IIci at the expense of the popular IIcx may seem puzzling.

The 16-MHz, three-slot IIcx has been outselling the more powerful three-slot IIci machine 3-to-1. Moreover, dealers tend to find the IIcx easier to sell than its 25-MHz cousin because of certain compatibility issues with the IIci. While those problems reportedly have been fixed, the perception lives on.

So why is Apple so obviously taking steps to remove the IIcx from its product line-up? Because the IIci and IIcx are too closely related for product-line comfort. Moreover, a number of Apple's largest corporate customers have professed a preference for the more powerful machine.

The fact is, the two machines overlap. And while the IIcx may at first glance seem less expensive, many corporate users say that the IIci's built-in color interface and faster performance make it a much more attractive system.

For these reasons, the IIci will fit nicely above the forthcoming one-slot, 20-MHz color machine. What's more, the personal computer market continues to place a premium on power at a competitive price. The IIcx's price/performance ratio no longer satisfies that demand, whereas the IIci can.

Apple unleashed dealers to push the IIci, with the result that some users now say they can buy a IIci with 4 Mbytes of memory and an 80-Mbyte drive at $4,080, which is only $10 more than the IIcx. Regardless of whether such low, low prices can be found by users around the country, it points out the most important point about Apple's evolving product line:

The Macintosh IIci is becoming the mainstream Mac. □

Heavy lessons from Outbound portable

The marketing failure of the Macintosh Portable isn't a result of poor technology; it stemmed from Apple's failure to understand what customers want in a portable computer.

That fact will be made evident with the expected announcement of a deal between Apple and Outbound Systems that will tacitly endorse the Outbound Laptop System.

Clearly, Outbound understands what Apple has slowly come to accept. Mobile Macintosh users want a small, lightweight computer with two to three hours of battery life that costs less than $4,000, runs Macintosh software and is available through reseller channels. That really shouldn't come as any surprise, because few people actually enjoy lugging around a 20-pound machine.

Apparently, Apple plans to support Outbound's efforts with an infusion of cash and perhaps some technical assistance, although it seems to have decided against licensing Mac ROMs to the company.

It all makes good marketing sense. If Apple were to license the ROMs to the Colorado start-up, it would open a can of worms. Not only would every potential clone maker in the world clamor for Apple's precious ROMs, they would have a key precedent to offer to the courts.

Alternatively, Apple could have bought the company and stuck an Apple label on the box. But, while the Outbound is a nice product that fills a market need, it's not up to Apple's quality standards.

Surely Apple will forge ahead with its own true laptop, one that provides the convenience of the Outbound with some of the technical achievements now found in the Mac Portable. □

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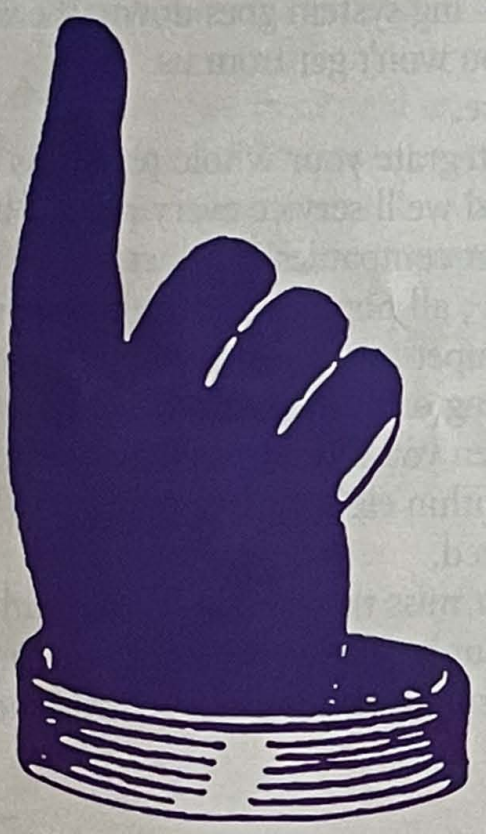

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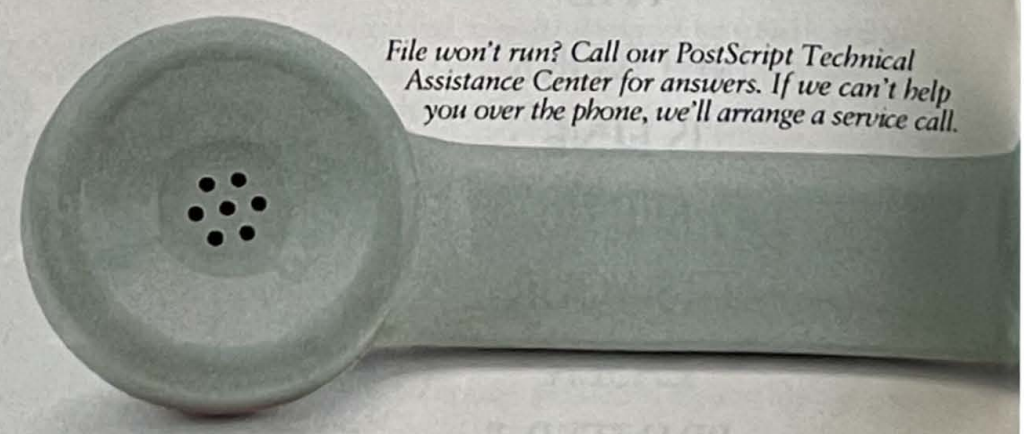

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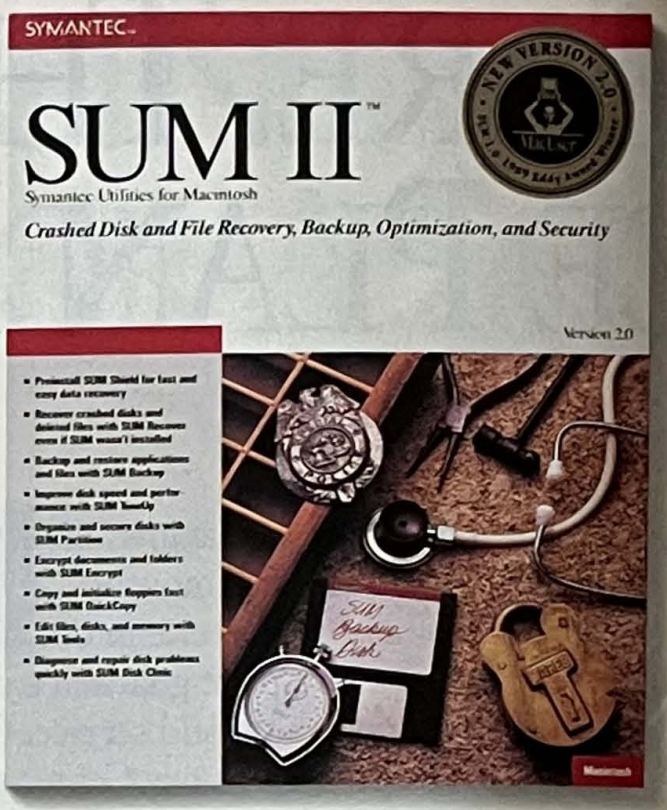
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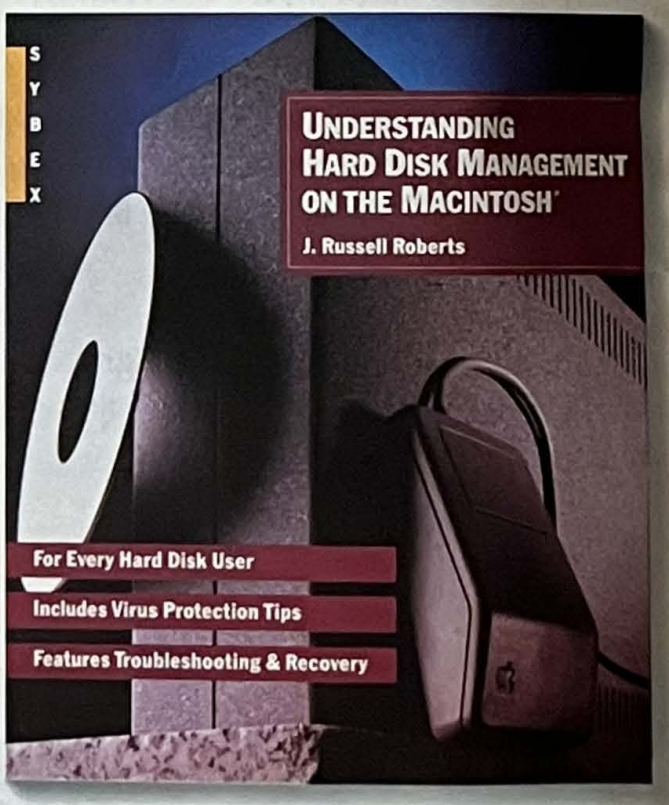
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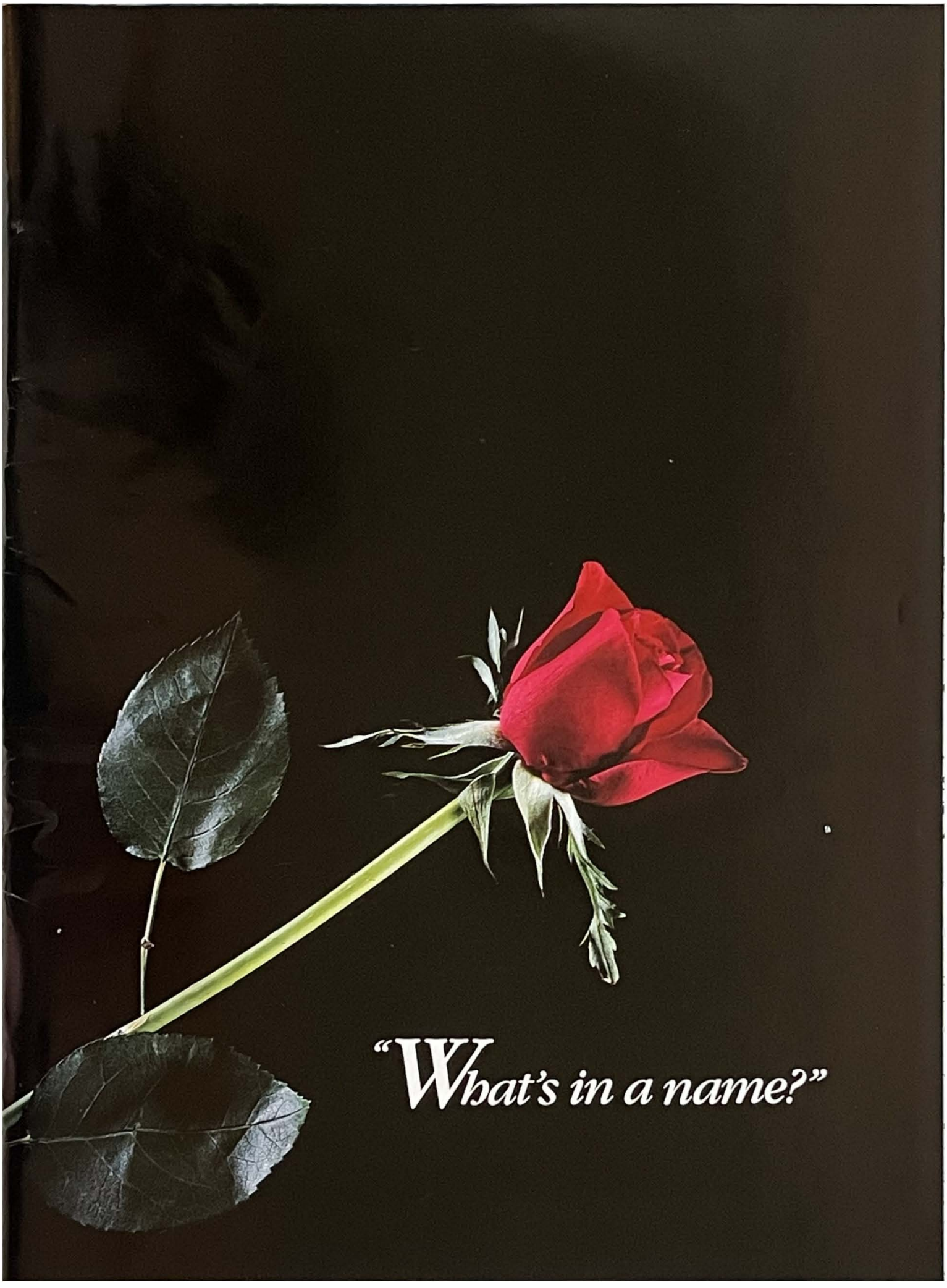
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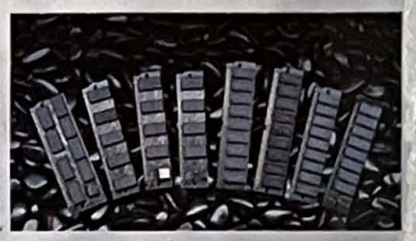

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SUSAN V. STEINKAMP

Alan Soucy, manager of computer standards for Martin Marietta's Information Systems Group: "Apple's support is a la carte ... DEC gives a full-course meal. IBM throws in a bottle of wine and dessert."

The search for technical support

By Dennis Wyss

For many computer managers, finding adequate technical support, knowledgeable advice and systems integration can be their greatest ongoing headache. This is not to say that support sources don't exist. Managers can go to Apple-certified third-party service providers or, if the company they work for is large enough, directly to Apple. But for the most part, Apple's strategy is still to refer customers to dealers for support issues. For many MIS managers, there's the rub.

One manager, who asked not to be identified, told his dealer he wanted to buy a 3270-emulation board, but "he didn't know what I was talking about.

"I understand Apple's plight — it doesn't have 50,000 employees. But if it wants to play with the big guys, it's got to work this thing out" and not rely on dealers, he said.

"I'm not sure I'd lay the blame on dealers," said Keith Redfield, supervisor of the technical support department at ComputerWare Inc. of Palo Alto, Calif. "I've worked for dealers with 35 CPUs on the floor needing to be [demonstrated] and known about. If you're a mom-and-pop operation, it's hard to point to one of your help and say, 'OK, you're the Mac systems expert.' "

Jim O'Gara, Apple director of integrated systems, maintains that much of the frustration surrounding dealer support stems from obsolete expectations, given the complexity of integrated systems.

"We taught the market to treat the microcomputer business as hardware, software and support, all in a bundle," O'Gara said. Today, he said, customers want file-server support and network integration. "Right now, we're at a straining point as customers realize that this kind of support is no longer in the bundle."

Pick and choose. IBM Corp. and Digital Equipment Corp. provide direct technical support to their customers. But these companies are primarily in the host business, which Apple is not, and so can include hand-holding as part of their higher overhead.

Apple offers a hybrid support structure, composed mostly of dealers, but with help from Apple-recommended consultants, local Apple offices and access to key technical executives in Cupertino, Calif., for some large customers.

"Apple's support is a la carte; at a certain level, you have to pay for it separately," said Alan Soucy, manager of computing standards for Martin Marietta Corp.'s Information Systems Group in Chantilly, Va. "DEC gives a full-course meal. IBM throws in a bottle of wine and dessert. From my perspective, I prefer the a la carte method of picking and paying for the support levels I require."

Managers happy with their support generally have top-notch dealers combined with strong technical support from local Apple offices. "The combination of support I've been able to get from my dealer, from the local Apple office and from Apple headquarters in California has been fine," said one MIS manager in the Midwest, who asked not to be named. "My local dealer can't answer some of my questions, nor do I expect it to. I've offered to pay Apple for the extra support we've received, but the company has never taken me up on it."

Reasonable expectations. Self-sufficiency is the rule at KPMG Peat Marwick. The CPA firm develops its own software, tests commercial applications and develops training programs for both.

"A dealer couldn't provide this, because it's unique," said Dick Webb, partner in charge of audit technology for Peat Marwick in Montvale, N.J. "And like most large customers, we can get the information we need directly from Apple."

Martin Marietta also uses internal technical support for its 6,000-Mac system. "The only value the dealer channel adds for us is getting products cheaply and quickly," Soucy said. "We do not look to Apple resellers for significant technical support or expertise. The kinds of technical-support issues raised in Martin Marietta are not the kind you expect to be answered by a dealer."

Third-party services. Over the past year, Apple has been changing its support infrastructure and now offers toll-free hot lines on A/UX and networking products, for example, as well as troubleshooting information on disk. And as part of its new support strategy, Apple has entered into working relationships with third-party service providers to help serve large customers.

In February, for instance, Apple joined with Peat Marwick to form Executive Integration Services (Exis), a for-profit business unit to set up executive-information and decision-support systems. Exis offers on-site support as well as training courses on topics such as Data Access Language, MacApp and MacWorkStation. "[Exis is] a model of what we'd like to do with systems integrators," said an Apple spokeswoman at the time of the announcement.

Some managers said they believe that Apple's joining with third-party support providers, such as Peat Marwick and Dallas-based Electronic Data Systems Corp., is a valid business strategy. Few if any observers expect Apple to offer an IBM-style direct-support program.

"The reality of today's corporate cost structures is that direct vendor support won't work anymore," Webb said. "For those who aren't satisfied with their dealer support, Apple is trying very hard to figure out a solution. But clearly, some customers are getting restless." □

Apple's evolving support infrastructure

- **Multipliers:** Support providers that, for a fee, offer specialized, integrated services; similar to the Apple/KPMG Peat Marwick joint venture, Exis.
- **Dealers:** Many are encouraged to specialize in specific market segments, to provide more in-depth support.
- **Toll-free hot lines:** Now available for customers buying A/UX and Apple-brand networking and communications products.
- **Hardware:** Apple's CD-based Technical Information Source to provide diagnostics and answers to frequently encountered problems. Other CDs and videotapes to follow.

One-minute MANAGER

Bear River offers new Mac programming courses

Berkeley, Calif. — Bear River Institute, a Mac technical training company based here, has announced four additional courses for Mac programmers.

The new classes — "Introduction to 68000 Assembly Language," "Macintosh Debugging Techniques," "Writing Macintosh Device Drivers" and "Combating Viruses on the Macintosh" — are offered for groups of up to 15 students at their work place. The company also has updated its popular introductory AppleTalk course to include material on Phase 2.

Bear River's one- to five-day courses "are primarily oriented toward programmers and people who have to work with large numbers of Macintoshes," said Anthony Meadow, who is president of both Bear River Institute and its sister programming consulting company, Bear River Associates.

"Our classes are all taught by senior Macintosh programmers," Meadow said. "They're people who can speak from experience."

For prices, dates and information on the company's other course offerings, Bear River Institute can be reached at P.O. Box 1900, Berkeley, Calif. 94701; (415) 644-0555.

FoxBASE+/Mac users get new training option

Norwalk, Conn. — Wellington Systems Inc. has added training for Fox Software Inc.'s FoxBASE+/Mac database to its roster of courses. The information-technology management consulting company will provide weekly classes through the summer at its headquarters, located here.

"They're small, hands-on courses that are limited to a few students," said Susan Happe, director of professional and industry relations at Wellington. "Students really get down to the nitty-gritty of designing their own system." Happe said Wellington's instructors all have extensive experience using FoxBASE+/Mac in a business setting and that they encourage students to bring real-life problems to the four-day classes. Classes tailored to business users are priced at $350 per day, while classes meant for data processing specialists are priced at $390 per day.

For more information, contact Nancy Trew at Wellington Systems Inc., 1 Norwalk W., 40 Richards Ave., Norwalk, Conn. 06854; (203) 866-4900.

Chang Labs provides C•A•T III classes

Santa Clara, Calif. — Users of the business-contacts relational database C•A•T III from Chang Laboratories Inc., based here, may wish to attend an intensive one-day class in San Francisco, New York, Boston, Los Angeles or Chicago.

The classes, which will be held monthly, are priced at $150 for students who bring their own Macs. Rented Macs are available for an additional $150. All attendees should bring their C•A•T III disks and manuals.

"It'll cover everything from the basics for the beginning user to the upper end of advanced operations, like custom reports generation," said Van Kouzoujian, director of user services for Chang. Subjects to be covered include keyword searches, mail merging, forms creation and time management.

The classes will be hands-on, with students following an instructor's lead as they put the program through its paces.

Chang Labs expects to increase the frequency of its classes in major cities and to add new course locations later this year.

Chang Laboratories Inc. is located at 3350 Scott Blvd., Building 25, Santa Clara, Calif. 95054-3177; (408) 727-8096.

The Mac Manager

The IBM PS/1: A golden opportunity for Apple

IBM recently handed Apple the marketing opportunity of a lifetime. In June IBM announced the Personal System/1, its new low-end computer designed specifically for the home computer market. In so doing, the company legitimized everything Apple has ever done with the Macintosh.

Check out this press announcement copy: "IBM today introduced the Personal System/1, a compact, powerful, easy-to-use computer for the home that can be set up in minutes." Did you catch that?

Yes, IBM is now selling a computer with nearly the *exact* market positioning that Apple used for the original Mac. The PS/1 is small, cute, decently powered, easy to set up and use, and runs practically out of the box. It comes with Microsoft Works, a modem, a mouse, a Prodigy account and *real* customer support. Plug-and-play personal computing, 1990s-style, courtesy of Big Blue.

BY DON CRABB

The revolution in easy-to-use computing that Apple started finally has been canonized by the biggest computer company in the world. And that's why the PS/1 is Apple's golden opportunity.

I can see the TV ads now. They'd be titled "Why Apple listens to IBM." They'd show a domestic scene with a mock PS/1 commercial on a TV in the background. The IBM ad would be touting the PS/1's ease of use and capabilities, while a kid in the foreground happily works away on a Macintosh that's photographed obliquely. The voice-over would intone: "Apple listens to IBM. When the biggest computer company in the world tells us that people need an easy-to-use computer that's also powerful, we listen. In fact, we couldn't agree more. Of course, listening to what people need and adapting technology to those needs has always been Apple's philosophy. That's why we introduced the Macintosh in 1984." At this point, the camera swings around and shows the Mac the kid has been using. It's a Mac 128K. In the background, the mock PS/1 ad talks about all of the PS/1's built-in capabilities.

Now here's the clincher: The kid's father walks in, sits down, turns on his own Mac IIfx with a color monitor and promptly brings up the same program his kid is using on the original Mac! Then the voice-over concludes: "And we couldn't agree more with IBM today. That's why our latest Macs are just as easy to use as they were in 1984. We've just added more capabilities." At this point, the IIfx screen displays the tag line: "The Apple Macintosh: A personal computer even IBM has grown to love."

At a time when the personal computer market is rife with confusion, where too much emphasis is being placed on mips, Mflops and CPUs, IBM thoughtfully has reminded us what the hell the deal really is. Computing, says IBM, shouldn't be left to the cognoscenti. Computing, says IBM, is really just another kind of tool for making your life easier. Computing, says IBM, ought to be fun.

IBM. Computing. Fun. Did you ever think you'd see those three words together? But it's true. IBM hasn't been sitting on its butt since the PCjr got flushed down the toilet. It's been thinking, researching, talking to people and planning for the future. Not just for next year but for the next 10 years. "We are in this new computer market to stay," said Skip Gladfelter, the IBM manager who helped invent the PS/1. And I believe him. Which makes it even better for Apple. Apple can count on IBM making a big deal out of the very advantages that define the Mac.

In short, the PS/1 gives Apple the chance to compete on equal terms with all DOS-compatible computers, since IBM says that ease of use is of pre-eminent importance.

For Apple to take advantage of IBM's largesse, though, it needs to do two things quickly. (1) Get its modular el-cheapo color cx out the door and price it at no more than $2,000, including all the goodies you need for a functioning system. (2) Drop the prices on all its computers to put them more in line with their DOS competition.

With these things done, Apple can sit back and ride the wave that IBM and the PS/1 have thoughtfully created for it. □

What The Best Backup Systems Have To Back Them Up.

The highest performance tape backup systems for Macintosh™ all have one thing in common. They rely on data cassette to back them up. Because CMS, EMAC, Mac Products USA, MicroNet Technology, Procom Technology, Ruby Systems and Thirdwave Computing know that the data cassette is the best format for backing up your Mac.

These companies prefer data cassette systems because they're fast, with transfer rates of up to 1¼ MB per minute, they're economical, and they feature unsurpassed reliability. The editors of two leading industry magazines agree.

In December 1989, Macworld™ compared tape backup systems; and in file-by-file backup and restore speed comparisons, the cassette format dominated. Macworld's review of all tape backup systems touted the data cassette drive's performance as "fast and reliable . . . consistently good-to-excellent performers in our speed tests." While MacUser's™ December 1989 report goes one step further, stating "Cassette drives offer greater capacity and more speed." What more needs to be said?

When it comes to tape backup systems, make sure you go with the top rated format for Macintosh: the data cassette. And the company that backs up the best data cassette systems is TEAC. Because at TEAC, we know that our customers expect the best.

TEAC

Expect The Best.

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FILE FORCE

THE FIRST RELATIONAL FILE MANAGER FOR THE MACINTOSH

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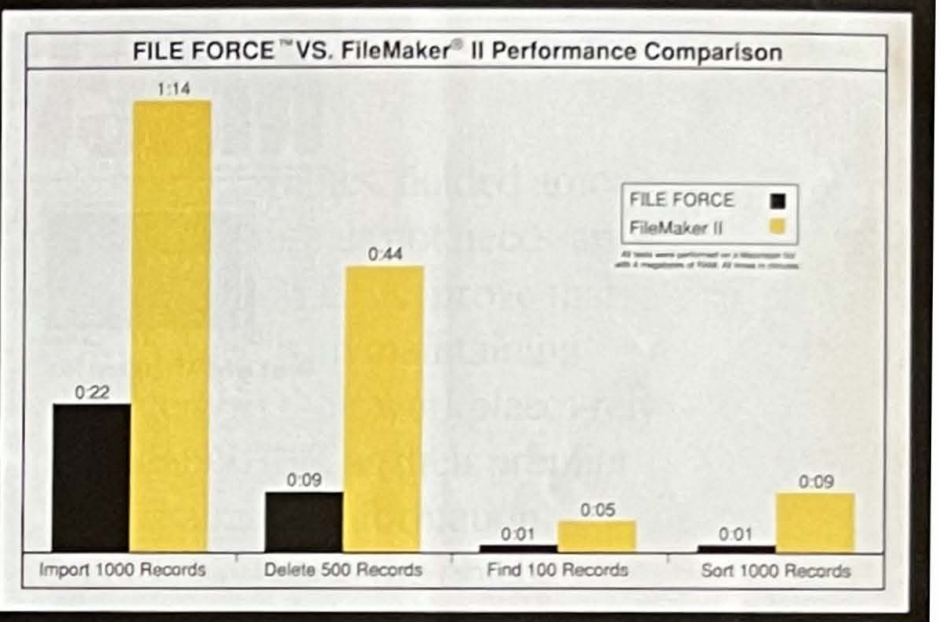
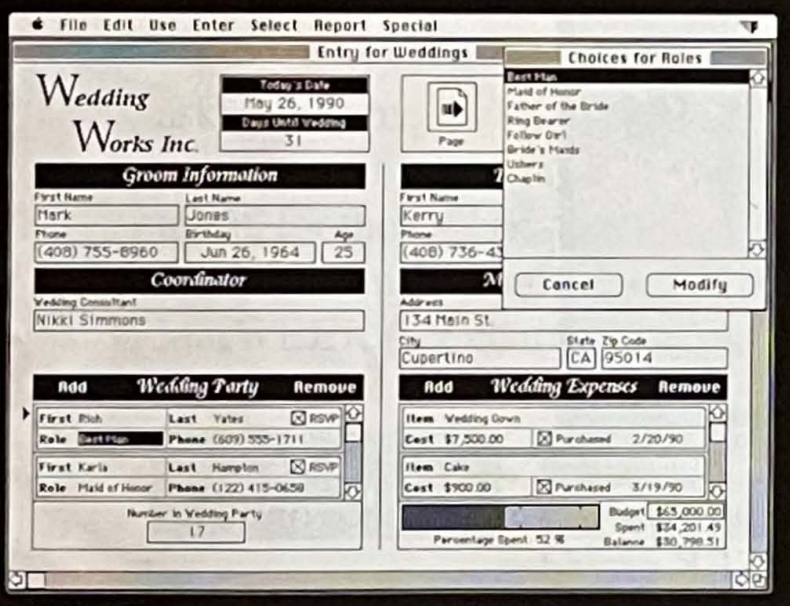
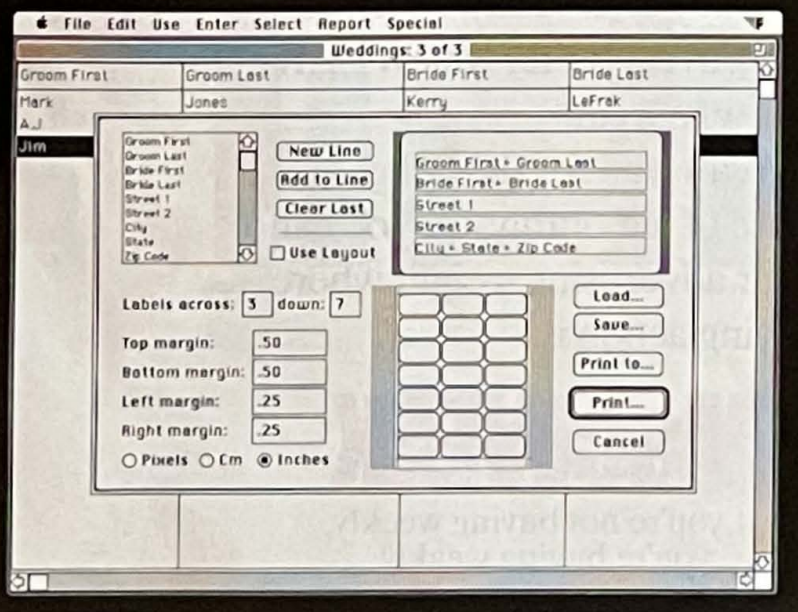




FILE FORCE allows you to easily create your own forms



FILE FORCE includes an easy-to-use, point-and-click label maker

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"What sets this program apart is its impressive array of features." –MacWeek

"Buyers of FILE FORCE praised its ease of use." –PC Week

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Quark gives XPress new face
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HyperCard 2.0 varies card size, adds text buttons
Apple puts pedal to the metal
Mac IIfz, A/UX 2.0, video boards due
March 19: Moving into the fast lane
Gassée resigns
'Wicked-fast Mac' built for speed
TECH ANALYSIS
New A/UX runs Finder — it's a keeper
Will price cut put CD SC in the mainstream?
Apple, developers promise more discs

Not to throw our weight around, but some things are just too important to wait months for.

Like the latest news.

Or your latest ad.

Each week, at least a dozen new Mac products are introduced. And MacWEEK is there to cover them, creating an information flow that Macintosh volume buyers rely on 42 weekly issues each year.

News is important to big buyers because they're the ones continually making purchase decisions. Their jobs depend on the intelligence only MacWEEK provides.

So it should come as no surprise that in study after study, Macintosh volume buyers prefer MacWEEK by a hefty margin.*

You can wait for the delayed response of a monthly. Or you can put your advertising weight where the buying action is.

MacWEEK

If you're not buying weekly,
you're buying weakly.

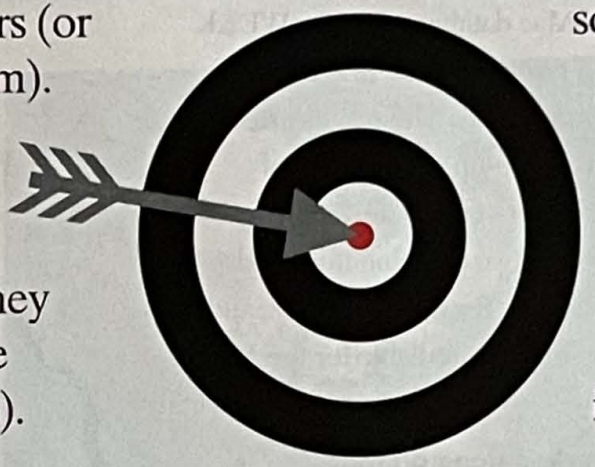
* See following page for more information.

How MacWEEK weighs in.

No other Macintosh publication is as popular as MacWEEK among the Mac market's most important buyers.

In four independent studies conducted over the past two years, MacWEEK carries the most weight with Mac volume buyers (or MVBs as we know them).

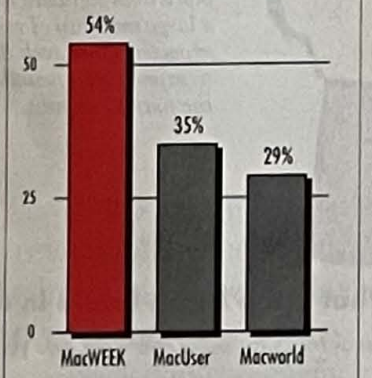
When MVBs are asked to name the publication most useful for their work, they overwhelmingly choose MacWEEK (see charts).



These market studies, fielded among Macintosh professionals not necessarily subscribing to MacWEEK, prove that managers charged with maintaining Mac technology in their workplaces rely on MacWEEK as their premier source of information.

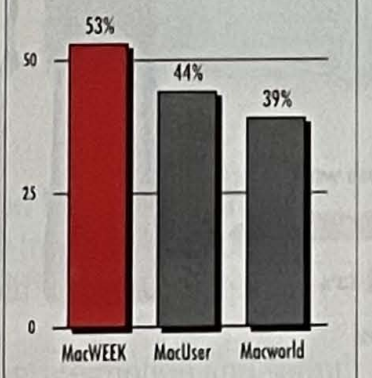
When the object is selling to the most informed, most active buyers, direct your message to the core of the Mac market in MacWEEK.

ACIUS Customer Study



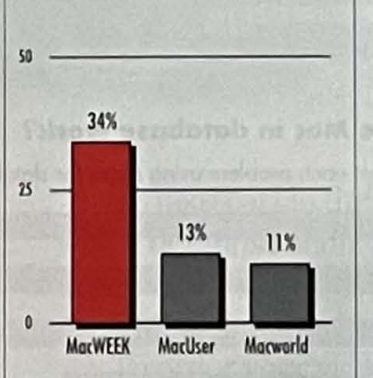
Source: Sep. 1988 Fleischman Field Research
Base: Purchase influence for 50+ Macs

Intelliquest MediaTrack Study



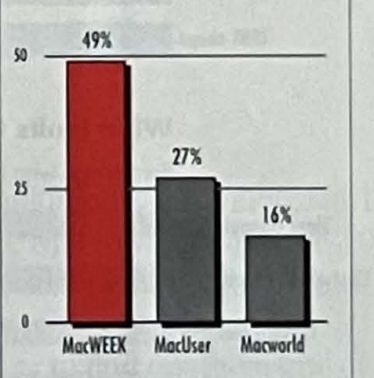
Source: 1989 Intelliquest
Base: Regular readers of each publication

Pacer Customer Study



Source: Feb. 1989 Evans Research
Base: Purchases for 10+ Macs

SuperMac Customer Study



Source: Nov. 1989 The Research Spectrum
Base: Purchases for 10+ Macs

MacWEEK

If you're not buying weekly, you're buying weakly.

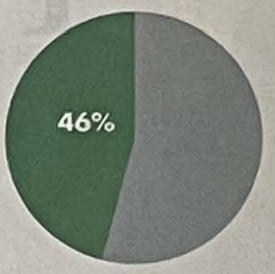
Mac databases power up

Database management on the Macintosh has come a long way from its humble origins in single-user flat-file applications that emphasized the graphical advantages of the platform more than its data-crunching capabilities. Today, the Mac has moved out of the corporate graphics ghetto in large part because business users now have the tools to build fast, powerful relational systems able to access host data.

To gauge the state of the Mac database art, MacWEEK undertook a major study of current and planned uses of Mac databases in large organizations. The results are presented here along with a close-up examination of the reasons the Mac has lagged in corporate database applications, a debate between two prominent user advocates on the strengths of the Mac for database work, and a roundup of the database software available for the Mac.

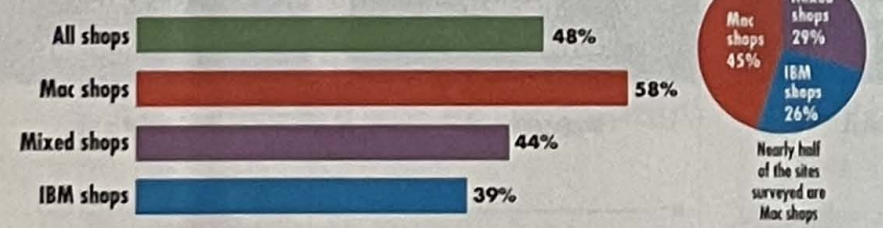
What PCs are used for database work?

Percentage of PCs on site used for database work



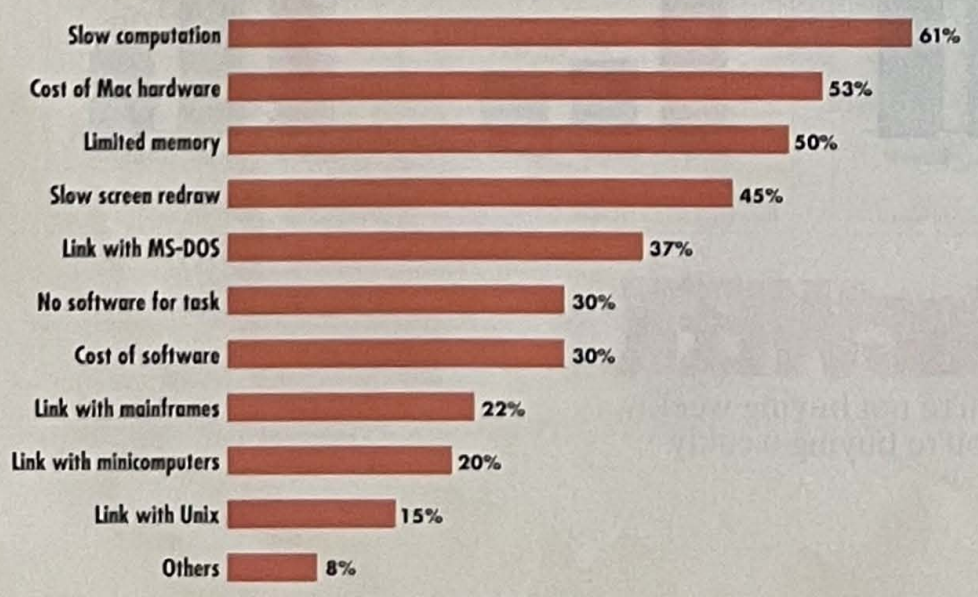
How much database work is done on Macs?

Average percentage of database work done on Macs



What limits the Mac in database work?

Percentage who have each problem using Macs for database work



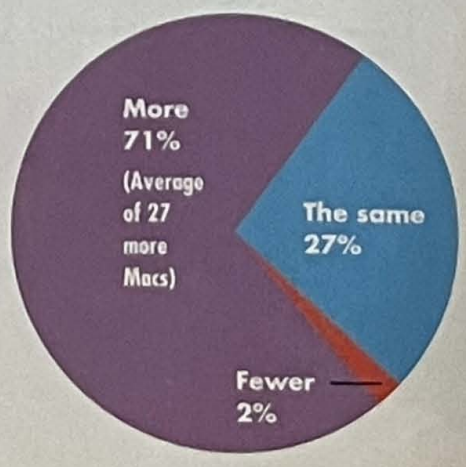
Base for charts on this page: Involved with databases

Slow start, future growth

A smaller percentage of Macs than IBM PS/2s are used for database work. Even at Mac shops, where more than two-thirds of personal computers are Macs, the percentage of database work done on Macs is underrepresented. Characteristics of Mac hardware (CPU performance and cost) were cited as limits on Mac database use more than software issues. But a large majority of respondents expected Macintosh database use to expand significantly during the next 12 months.

What is the Mac's future in databases?

Use of Macs for database work one year from now



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How Macs are bridging the database gap

By Dan Ruby and Jonathan Oski

The enduring paradox about the Macintosh in business is that it has achieved great success in every application area except the one that is at the core of business computing — database management.

That's not to say that many users have not developed sophisticated database systems to manage their departments and businesses. But not enough of them have.

According to recent quarterly reports from the Software Publishers Association, Macintosh software accounts for about 15 percent of all personal computer business-software sales but only about 8 percent of the database category.

Even among the biggest Macintosh sites surveyed by MacWEEK for this report, IBM PCs and compatibles outnumber Macintoshes for use in database applications by a wide margin.

What's the explanation for the database gap?

In years past, there may have been good reasons that Macs were not seriously considered for robust, mission-critical database applications. Early 68000-based Macs and even the first Mac II models were underpowered for the serious data crunching called for by large-scale corporate databases. Nor were powerful relational-database software packages available for building complex applications.

Today, neither of these objections remains valid. High-end versions of the Mac II series provide power comparable to that offered by the fastest PCs available in the Intel-based world. On the software side, there is now a choice of mature, full-featured database programs that are as good or better than anything offered for PCs.

Barriers to entry. Still, the database gap persists. Interviews with corporate computer managers revealed at least eight reasons — some based on faulty perceptions, some on real deficiencies — that Macs remain underused for database work.

▸ **Inertia.** The installed base of DOS machines and DOS database applications creates a barrier to Macs. Investments in time, effort and money to develop databases on one platform are not abandoned without good cause. There are many DOS-based workhorse applications out there that may be ugly to a Mac enthusiast but they do the job and will not go away until someone can prove that rewriting the application on another platform is cost-effective and beneficial.

▸ **Maturity of software.** The first PC databases were developed in the early 1980s and have therefore had a longer time to mature and expand in capability. Search and sort algorithms have been refined. Development tools have become sophisticated and flexible. Industry standards have emerged. By contrast, powerful relational databases became available on the Macintosh only recently.

▸ **Cost of hardware.** For users and developers not convinced of the advantages of a graphical interface, the higher cost of a Macintosh compared with an equivalent PC clone is difficult to justify. Since multi-user database systems involve multiple computers, the Mac's price premium is even more of a penalty in database applications than in stand-alone productivity applications such as spreadsheets or word processing programs.

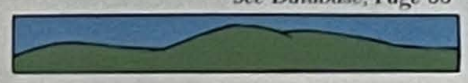
▸ **Performance.** Despite the improvement in the basic speed of Mac hardware, Mac databases still may suffer slow overall performance. Database performance is dependent on many variables, such as the file server, processor and I/O speed; network protocols and topology; and the quality of the application code. Some pieces of the Macintosh database puzzle — such as the initial release of ACIUS Inc.'s 4th Dimension and the throughput of the Mac's built-in networking architecture, LocalTalk — are notably sluggish.

▸ **Client/server technology.** A major advantage of choosing the PC as a database platform is the wider availability of client/server technology. Products such as Oracle, SQL Server and VIA are now available for client/server applications on PCs, while none supports the Macintosh as anything but a front end. When widely implemented, Apple Data Access Language (DAL) will permit Macintosh applications to query databases residing on host computers and central servers. But DAL is unproven, and the fact remains that there are more options available for PCs than for Macintoshes.

▸ **Psychology.** DOS database developers tend to value high performance and low cost over ease of use. There are some who believe there is a certain machismo in writing database code, and some of them may even consider ease of use to be a disadvantage. With character-based systems, usually less time is spent refining the user interface, since functions such as buttons, windows and dialog boxes are not present. This can drastically decrease development time.

▸ **Development environment.** Related to the maturity of database software is the

See Database, Page 66



Important database features

Percentage that rate feature "very important"

Ease of use	81%
Ease of learning	73%
Report generation	64%
Processing speed	64%
Import/export	60%
Link to other platforms	57%
Multi-user capability	56%
Link to MS-DOS	42%
Documentation	41%
Security features	32%
Programming language	30%
Development platform	28%
Link to HyperCard	25%
Link to mainframes	22%
Business graphics	22%
Macros	20%
Link to minicomputers	19%
Link to Unix	12%

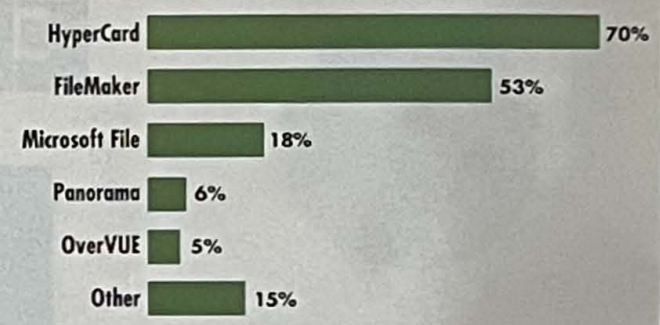
Base: Involved with databases

Software choices

Except for HyperCard, the most-used database packages are Claris' FileMaker and ACIUS' 4th Dimension. The two leading relational packages (the only ones for which the data was significant) were nearly even in most satisfaction ratings, but Fox Software's FoxBASE+/Mac was preferred for its processing speed. Mac qualities such as ease of use and learning led the list of important features.

Flat-file database software used

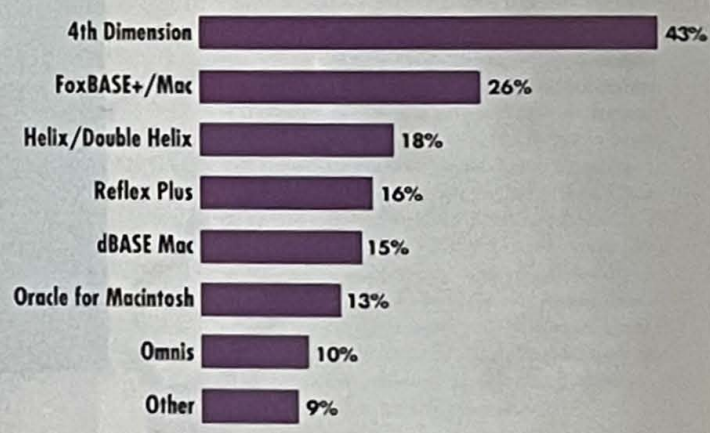
Percentage using flat-file Mac database software



Base: Sites using flat-file database software

Relational database software used

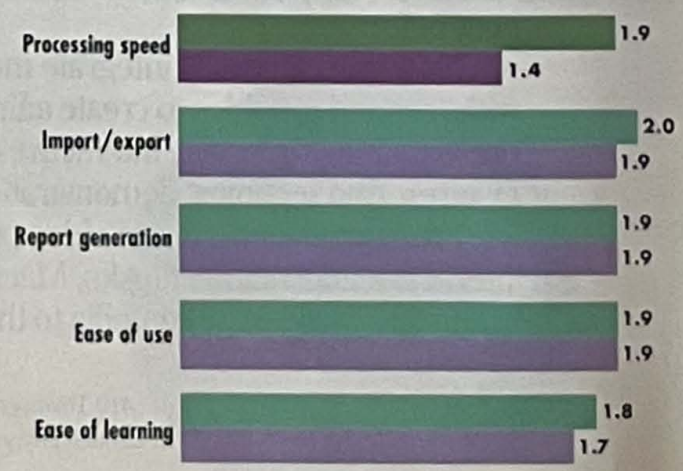
Percentage using relational Mac database software



Base: Sites using relational database software

Satisfaction with database features*

3 means "very satisfied"; 1 means "not satisfied"



*Sample too small for Helix/Double Helix ratings.

Methodology

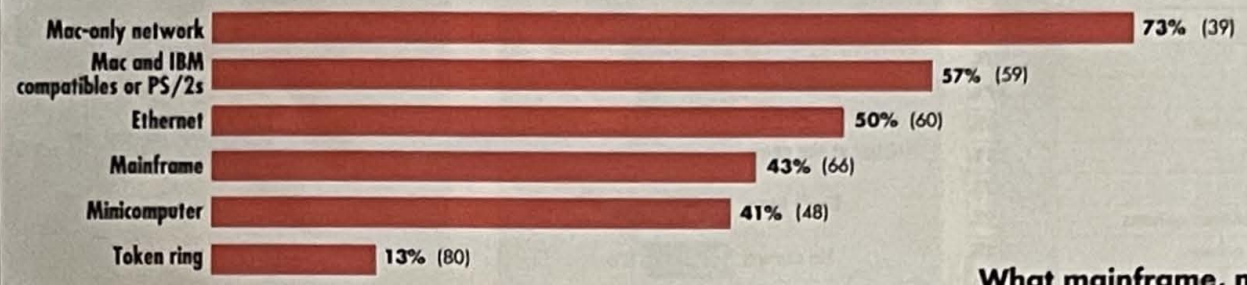
One thousand questionnaires were mailed March 2, 1990, to a random sample of MacWEEK subscribers involved in purchasing database software for their organization. As of April 3, a total of 513 usable questionnaires had been received. Excluding four undeliverable surveys, the response rate was 52 percent.

Each subscriber sampled was involved in purchasing software and hardware products for at least 10 Macintoshes. Most of their organizations have 10 or more Macs on site. Sites with 10 or more Macintoshes make up only 6 percent of all work sites with Macintoshes, yet this 6 percent accounts for 74 percent of all Macintoshes installed at business, government or educational organizations, according to The Comtec Study, Wave 6 from InfoCorp/The Gartner Group.

In the tables and charts that follow, the respondents were involved in creating, managing, manipulating or accessing databases for their organizations. — By Griffin Dix

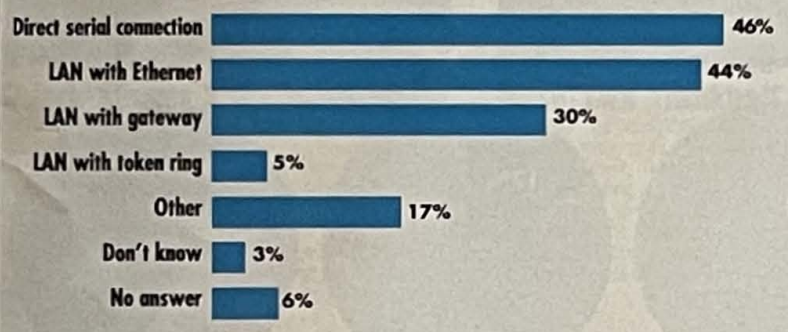
How database Macs are connected

Percentage of organizations connected by type of network; average number of Macs (in parentheses)*



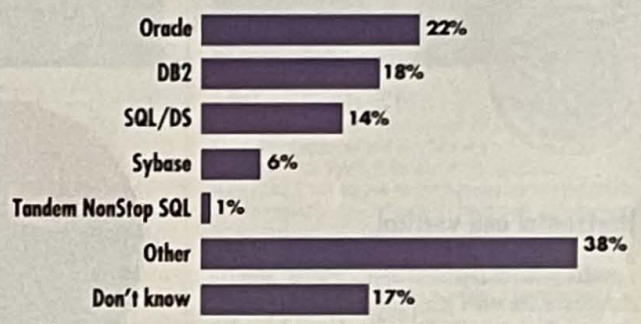
How Macs connect to mainframes, minis

Percentage of organizations using type of connection



What mainframe, mini databases are accessed

Percentage of sites accessing mainframe, mini software products

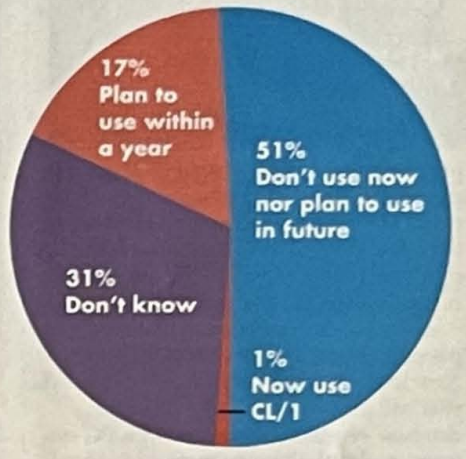


Among those organizations that have Macs connected in each way. Base for top chart: Involved in database. Base for bottom charts: Macs are connected to mainframe or minicomputer

The well-connected Mac

A high percentage of Macs used for database work are connected to LANs and almost half are linked to host computers. The largest networks use token-ring or Ethernet topologies. The most common method of linking to mainframes is via direct serial connections. Oracle is most widely used for host data, followed by two IBM databases. Apple's Data Access Language, formerly CL/1, is largely unknown at Mac-mainframe sites.

Use of CL/1 at location



Point/Counterpoint

Mac falls short in database tasks

By Jim Seymour

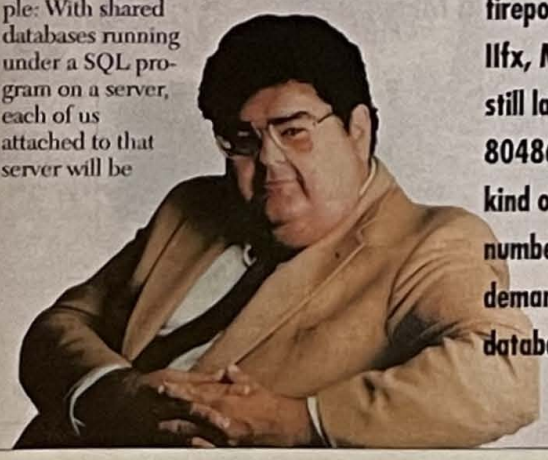
I love the Mac, but it's not a very good database machine.

Certainly there are a number of interesting database programs for the Mac. Filevision and Helix showed us what databases could be. FileMaker redefined our notion of Everyman's database-management-system program. DAtabase became one of the all-time hit desk accessories. And the current releases of 4th Dimension and FoxBASE+/Mac show that graphical-interface database software doesn't have to be slow or limited.

But look at almost any vertical-market DBMS application available on the Mac, from medical-office-management programs to video-rental-store packages. They're slow, clumsy, feeble. Few qualify as good turnkey programs.

OK, you say, that's because those developers did a poor job. But all of them ...? Worse, the Mac is also a poor database-querying machine in mixed-hardware environments.

Despite all the hoopla over SQL databases, hardly anyone talks about the most important benefit of standardization on SQL. It's simple: With shared databases running under a SQL program on a server, each of us attached to that server will be able to use whatever front-end program we wish to communicate with that database, as long as those front ends have SQL-query capabilities.



For example, I could use Excel or Lotus 1-2-3 or Paradox on my PC as a SQL-compliant DBMS front end. In this way, SQL promises PC users freedom to work their own way and to access shared databases — the core of corporate computing — through their own preferred programs.

And the Mac? Well, SQL-based Mac programs are few and far between. And though Apple talks a lot about CL/1 and connectivity, the fact is that the Mac is still a poor relation when querying a mixed-platform networked database.

I haven't even mentioned the spectacular performance of PC databases using the multithreading capabilities of OS/2. Nor that, despite the welcome gain in firepower with the IIfx, Macs still lag behind 80486 PCs in the kind of absolute number crunching demanded by databases.

Despite the gain in firepower with the IIfx, Macintoshes still lag behind 80486 PCs in the kind of absolute number crunching demanded by databases.

Maybe it isn't the Mac's fault but rather that of Mac DBMS programmers and application developers. But in the end, it's the Mac and its users that lose out.

Jim Seymour is a consultant on strategic systems and management productivity for Fortune 500 companies and a columnist for PC Week, PC Magazine and PC/Computing.

Mac 'oozes right stuff' for database work

By Don Crabb

The Macintosh is the best personal computing platform for both small- and large-scale database work.

Now that I've gotten your attention, Jim, try to contain your DOS-OS/2 hubris long enough to hear me out.

Let's get your obvious objections out of the way first. The Macintosh has not been a hotbed of sales for database products, especially not for high-end development products. Does that make the Mac a database weakling? Not a chance. High-end Mac database vendors, not the Mac's underlying technology, carry the blame there.

The unmistakable reality, of course, is that the Mac oozes all the right stuff for real database work: easily accessible floating-point processing; a graphics interface that makes entry forms, reports and customized screens easy to create; plenty of CPU to sort, manipulate and modify records; and *beaucoup* networking options to handle interoperability issues with databases on workstation networks and bigger iron. Not to mention first-rate SQL, 3270 and VAX support.

In addition to the Mac's accessible technical superiority as a database platform, Jim, you also can't deny the plethora of first-rate database software that runs only on the Mac.

Let's read a short honor roll of Mac database applications: Claris Corp.'s FileMaker Pro (simply the best flat-file database for small businesses), ACIUS Inc.'s 4th Dimension (the most complete, powerful and extensible relational-database development system available on any computer) and Odesta's Double Helix (the easiest-to-use relational database on the planet).

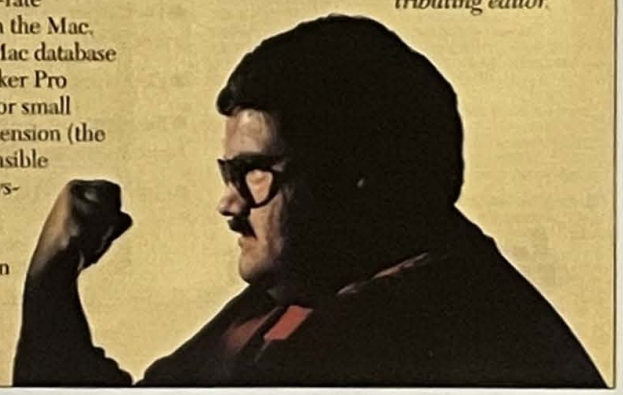
Where are the DOS, Windows or OS/2 databases to compare with these Macintosh stalwarts? Still waiting to be invented, unfortunately.

Finally, Jim, don't just take my word for it. Talk to the database consultants. Talk to the micro managers. Talk to the small-business owners. They'll tell you the same thing they've told me. If you need to build and use a database, regardless of its sophistication or simplicity, the Mac combines the best in hardware technology, operating system, GUI, networking support and available software.

In addition to the Mac's accessible technical superiority, you can't deny the plethora of first-rate database software that runs only on the Mac.

No amount of overweening DOS arrogance or whining about market share is going to change that fact.

Don Crabb is director of laboratories and senior lecturer for the department of computer science at the University of Chicago. He is also a MacWEEK contributing editor.



Database

From Page 64

availability of sophisticated development tools. PC database developers enjoy a wide range of available tools such as compilers, run-time generators and procedural languages. These tools are much more limited on the Mac.

▸ **Vertical applications.** For end users looking to buy finished database applications customized to their particular industry, a vast catalog of PC applications covering virtually every vertical segment provides a wide range of choice. Vertical Mac databases are few and far between.

Bridging the gap. While each of these barriers has impeded widespread use of Macs for database applications, the gap is narrowing in every case.

MS-DOS interoperability provided by the Mac itself and by several Macintosh database programs means that existing DOS databases can be easily ported to Mac systems. Relational Macintosh databases have matured into second, third and fourth iterations that provide all the sophisticated tools and features available in PC software.

Apple has finally begun to address the price differential of Macintosh hardware. New low-cost Macs slated for the end of this year will make Mac-based multi-user database systems competitive with PC systems. And with the growing availability of high-speed Ethernet, token-ring and ARCnet networks for the Macintosh, performance is improving.

See Database, Page 68

Departmental use of databases

Percentage of sites using Mac databases

Administration	62%
Accounting/finance	50%
Education/training	39%
Research & development	36%
Sales/marketing	35%
Engineering	30%
Public relations/communications	25%
Micro/information center	24%
Personnel	22%
Purchasing	22%
Consulting	21%
MIS/data processing	19%
Manufacturing	15%
Other	7%

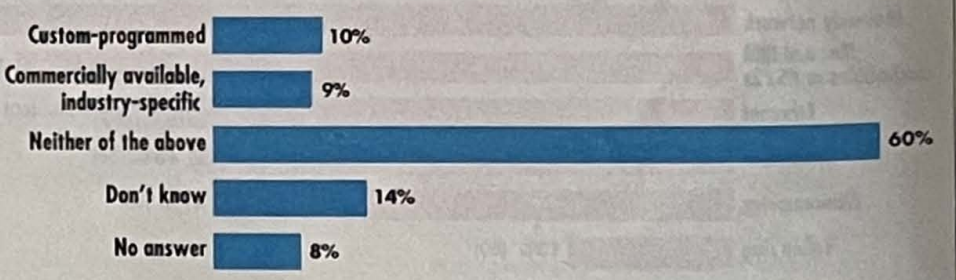
Base for charts on this page: Involved with databases

Horizontal and vertical

Besides general business applications, Mac databases are used most for accounting and finance, training, R&D, and sales and marketing. About one-fifth of sites bought customized database systems, evenly divided between commercial vertical software and custom-programmed applications. In about one-quarter of the sites, consultants were called for programming, maintenance and user support.

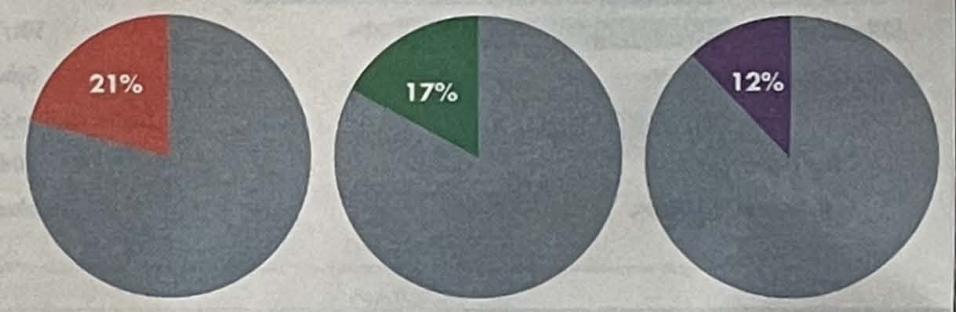
Use of customized database software

Percentage of sites using types of customized database software



Use of outside consultants

Percentage using outside consultants for ...



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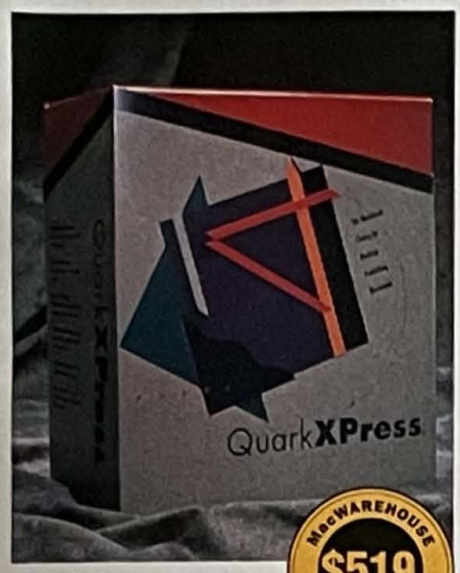


Quark XPress 3.0

(Quark) XPress 3.0 boasts a more intuitive user interface, many new features, plus redesigned and reorganized documentation. New measurement and page palettes provide the user with interactive on-screen access. A library stores frequently used items, and a pasteboard provides a work area next to each page. You can group text and graphics as a single element and rotate them a full 360 degee in 0.001 degree increments. Color trapping ensures precise color printing. **Fax*FACTS* #2509.**

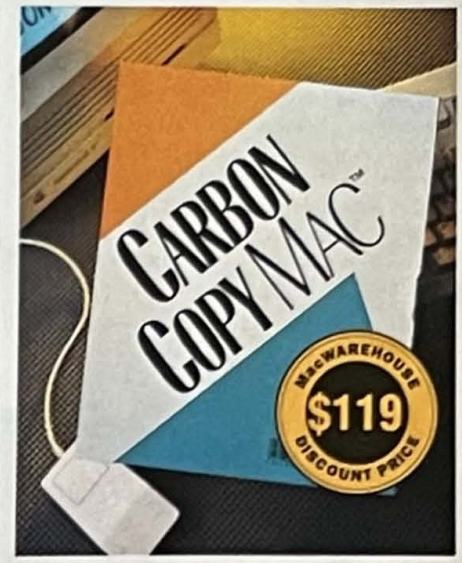
QuadLYNX Trackball

(LYNX) The QuadLYNX Trackball uses Honeywell aerospace technology to give precise fingertip control over cursor movement. This device offers much greater precision in cursor placement. Just spin the trackball and the cursor flies across the screen, quickly and accurately to where you want it. Great for desktop publishing, CAD/CAM, graphics and arcade games.

Fax*FACTS* #5018.

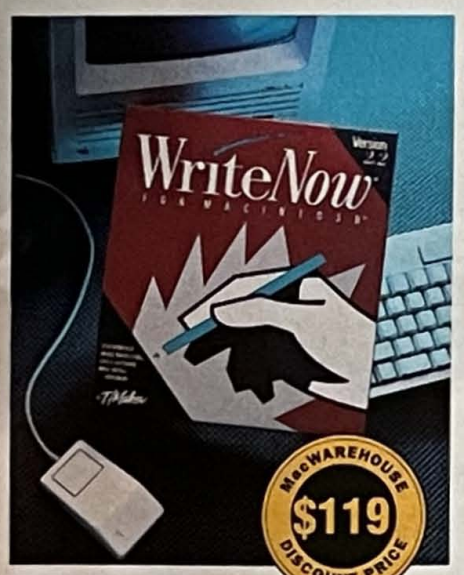
The Organizer

(Co-Star) Put your laser printer on the CoStar Organizer and you'll have a handy place for your printer and all its supplies. In addition, it will spruce up the appearance of your office with its clean design. Its cable management systems keeps wiring neat and out of sight. Beyond that, it provides a place to store extra reams of paper, plus extra paper trays and toner cartridges and casters make the whole system mobile. The CoStar Organizer even has a place to put a hard disk drive. **Fax*FACTS* #1001.**



Carbon Copy Mac

(Microcom) Carbon Copy Mac is a remote control software package for the Macintosh. It allows one Mac to remotely access and operate another Mac's peripherals, screen, keyboard and mouse. Carbon Copy Mac can be used for training, collaborating, file transfer, troubleshooting and updating software. It is the ideal Macintosh network management tool. Carbon Copy Mac can run locally over an Appletalk network or remotely with modems on both machines. **Fax*FACTS* #1753.**



WriteNow 2.2

(T/Maker) The fastest and easiest to use Macintosh word processor, WriteNow includes direct MS Word 3.0/4.0 compatibility. This two-time Eddy Award winner also features the largest thesaurus (1.4 million words) and dictionary (135,000 words) combination available in the Macintosh World. Coupled with such features as mail merge, multiple headers and footers, date formatting, multiple columns and predesigned mailing label templates, WriteNow is the Macintosh business word processor of choice.

Fax*FACTS* #7027

KeyPlan

(Symmetry) KeyPlan simplifies project management, so you can get the job done. Start with the outliner, where you can put your ideas in order. KeyPlan instantly converts your outlines to charts. To change any chart, just select and drag the various elements. Charts and graphics include PERT, GANTT, area, line, bar, and scatter. Just click the mouse and move to any view. KeyPlan adapts to your style and custom queries and menus.

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Database

From Page 66

Apple has targeted client/server architecture as an important technology area for the Macintosh, and support for Macs in such distributed environments is likely to soon match that available for PCs. The one area where the Macintosh will continue to lag is the availability of Macintosh-based servers, but with extensive tools to connect to DOS-based or host servers, that may not matter.

The acceptance in the DOS world of the advantages of graphical user interfaces will go a long way toward overcoming the macho factor. While graphical database applications may be more difficult to develop, they provide significant advantages in lower training and support costs for users.

Finally, sophisticated development tools for Mac databases are increasingly available from database vendors and third parties. Also, the list of vertical solutions available for the Macintosh is growing as a community of Mac database consultants and developers has emerged.

Given that the Mac made its first inroads into business as a graphics machine, it is not surprising that the last barrier it has to cross is the core business application of database management. Now that it can match the sophistication, complexity and performance of PC database standards, the Mac appears ready to finally overcome the database gap and take its place as a full partner in business computing. □

Database products

The tools available for database management on the Macintosh have expanded in number and feature depth in the past two years. Here are historical capsules and review summaries of each of the major players, emphasizing their strengths for use in corporate, multivendor environments.

FLAT-FILE DATABASES

File 2.0
Microsoft Corp.
1 Microsoft Way, Redmond, Wash. 98052;
(206) 882-8080; (800) 426-9400
List price: $195
History: First flat-file manager to take full advantage of the Mac interface when released in February 1985. Upgrade to 2.0 took almost four years.
Corporate strengths: Easy to use; extensive template library; good integration with other Microsoft applications.
Review summary: Easy to use and learn, but lack of depth makes it suitable only to minimal file-management needs. (MacWEEK, Dec. 13, 1988)

FileMaker Pro
Claris Corp.
5201 Patrick Henry Drive, Box 58168, Santa Clara, Calif. 95052; (408) 727-8227
List price: $299
History: Latest incarnation of FileMaker due to ship this month. Originally published in 1985 by Forethought Inc. Acquired by Claris in 1988, upgraded to FileMaker II with multi-user capability; new features and design refinements. Pro release provides performance improvements and support for sophisticated drawing tools.
Corporate strengths: The standard for personal flat-file databases; XTND architecture eases data sharing with other applications.
Review summary (FileMaker II 1.1): FileMaker has been getting better with age, and latest incarnation continues the trend. (MacWEEK, Oct. 11, 1988)

Panorama 1.3
ProVUE Development Corp.
15180 Transistor Lane, Huntington Beach, Calif. 92649;
(714) 892-8199
List price: $395
History: Introduced in September 1988. Superseded OverVUE, one of the first Mac file managers. Retains the spreadsheet capabilities of its predecessor but includes color, graphing, drawing and outlining capabilities.
Corporate strengths: Familiar spreadsheet interface; quasi-relational; good performance.
Review summary: Faster than FileMaker II; flexible data entry, reporting and charting features. (MacWEEK, Jan. 23, 1990)

RELATIONAL DATABASES

4th Dimension 2.10:
ACIUS Inc.
10351 Bubb Road, Cupertino, Calif. 95104;
(408) 252-4444
List price: $795 (single user)
History: First comprehensive implementation of Mac interface for database program when introduced in 1987. Sluggish performance and difficult learning curve were addressed in 1989 with 2.0 release. Application environment with modular functions revolving around database was introduced last April.
Corporate strengths: Takes full advantage of Mac interface; extensive program-development tools; connectivity tool kits for CL/1, Oracle and Sybase SQL Server; part of comprehensive information management system, including Interapplication Communications to ACIUS mintapplications.
Review summary: Real speed improvements result from redesign of data engine and file structure. New debugger, external areas for C and Pascal, and good tools for accessing guts of Mac operating system make 4D a powerful tool for high-end development. (MacWEEK, Nov. 14, 1989)

dBASE Mac 1.01
New Era Software Group Inc.
DBMAC 1.01
1 Datran Center, 9100 S. Dadeland Blvd., Penthouse 1, Miami, Fla. 33156; (305) 670-4844
List price: $495
History: Released by Ashton-Tate Corp. in 1987 with hopes of luring PC dBASE users to the Mac, but incompatibility with dBASE proved fatal flaw. Sale last month to New Era will result in new name and new campaign for low end of market. Future release of dBASE IV Mac expected from Ashton-Tate.
Corporate strengths: Good use of Mac interface; approachable by novices.
Review summary: Intuitive handling of files and relationships, but poor performance and especially incompatibility with PC dBASE are major stumbling blocks. (MacWEEK, Dec. 1, 1987)

See Database products, Page 70

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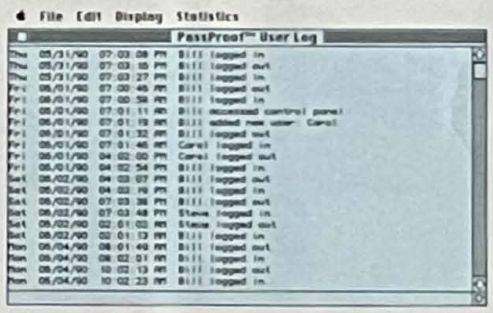

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Database products

From Page 68

Double Helix 3.0
Odesta Corp.
4084 Commercial Ave., Northbrook, Ill. 60062;
(800) 323-5423; List price: $595 (single user)
History: First version of Helix released in 1984; introduced an innovative icon-based programming interface that remains unique today. Interim upgrades to Double Helix and Double Helix II refined the approach. Version 3.0 released in early 1989.
Corporate strengths: Close ties to Odesta's DEC databases yield advantage in Mac-VAX sites; CL/1 links to wide variety of host databases.
Review summary: Speed improvements, new macro features, efficient searching, multiple views of data and good data validation add to Helix's traditional strength in visual programming. Capability to build applications with Mac interface more limited than competitors. (MacWEEK, Nov. 14, 1989)

File Force 1.0
ACIUS Inc.
10351 Bubb Road, Cupertino, Calif. 95014; (408) 252-4444
List price: $395
History: Began shipping last May; descendent and subset of ACIUS' high-end 4th Dimension.
Corporate strengths: Full-featured database management system for middle-range applications.
Review summary: Breaks new ground by providing relational capabilities to product aimed at general users. (MacWEEK, May 22)

FoxBASE+/Mac 2.01
Fox Software Inc.
134 W. South Boundary, Perrysburg, Ohio 43551;
(419) 874-0162
List price: $495 (single user)
History: A dark horse when introduced in 1987, zoomed to the front ranks with its speed and dBASE compatibility. Its 1989 upgrade improved Mac interface and added powerful development tools.
Corporate strengths: Full compatibility with leading PC database, dBASE III+; best performance among Mac relational database programs; data-file compatibility permits easy porting of applications to PC version.
Review summary: Fastest performance for many database operations. Innovative application generator and powerful debugger bolster strong toolbox for application development. Mac interface now more than adequate. (MacWEEK, Nov. 14, 1989)

McMax 2.0
Nantucket Corp.
12555 W. Jefferson Blvd., Suite 300, Los Angeles, Calif. 90066; (213) 390-7923
List price: $295
History: Original McMax shipped in September 1987; first database program to provide application compatibility across Macintosh and DOS platforms. Limited implementation of Mac interface and substandard access to Mac toolbox were addressed in Version 2.0, released in 1988.
Corporate strengths: dBASE compatibility; good performance; support for HyperCard external commands.
Review summary: Version 2.0 makes better use of the Macintosh interface than did its predecessor, but it still looks like an MS-DOS application and is only designed for a single user. Some dBASE commands are not supported. (MacWEEK, March 21, 1989)

Omnis 5 1.103
Blyth Software Inc.
1065 E. Hillsdale Blvd., Suite 300, Foster City, Calif. 54404; (415) 571-0222; (800) 843-8615 (United States); (800) 223-8050 (California)
List price: $695 (single user)
History: Pre-eminent application for heavy-duty Mac database development since first release in 1985. Totally rewritten for Omnis 5 release in 1989.
Corporate strengths: Full procedural language; support for CL/1, Oracle and DB2; powerful application generator; data and applications compatible with versions for Microsoft Windows and OS/2.
Review summary: With better use of Mac interface tools, support for external routines, better validation and scrollable arrays, Omnis retains its position as a top competitor for high-end applications. Ad hoc querying remains inflexible. (MacWEEK, Nov. 14, 1989)

ReflexPlus 1.1
Borland International Inc.
P.O. Box 660001, Scotts Valley, Calif. 95067;
(408) 438-8400; (800) 331-0877
List price: No longer marketed
History: Once popular for its speed and low price, Borland abandoned this product, but it's still in wide use.
Corporate strengths: Relational power at a low-expertise threshold.
Review summary: Simple interface for setting relations; relational capability as easy to use as flat-file databases. Lacks procedural language and multi-user capabilities, and performance degrades with large files. (MacWEEK, Feb. 23, 1988)

SERVER-BASED DATABASES

Hyper/DB Library 3.1.1
Sybase Inc.
6475 Christie Ave., Emeryville, Calif. 94608;
(800) 879-2273
List price: $195
History: SQL heavyweight Sybase introduced this Mac front end to its host databases last October.
Corporate strengths: Access for MIS or database programmers from Mac with Sybase's on-line, high-volume transaction databases; development tools for HyperCard and Macintosh Programmer's Workshop; interface to 4th Dimension.
Review summary: Not yet reviewed in MacWEEK.

Oracle for Macintosh 1.2
Oracle Corp.
275 Shoreline Drive, Redwood City, Calif. 94065;
(800) 345-3260
List price: $699 (database and tools)
History: 1989 release gave Mac its first relational database with SQL capabilities, along with instant credibility at sites with Oracle databases on other platforms. Release 1.2 was introduced in April.
*Corporate strengths: Access to host Oracle databases from wide variety of Mac programs and languages. Emphasis in upgrade is on improvements to the SQL*Net query language, which now supports DECnet and IBM 3270 connections.*
Review summary (Oracle for Macintosh 1.0): HyperCard interface to mainframe database functional for users that require Mac data entry and development system, but bare-bones implementation is better-suited for Oracle users learning Mac skills, not Mac users learning Oracle. (MacWEEK, March 14, 1989)

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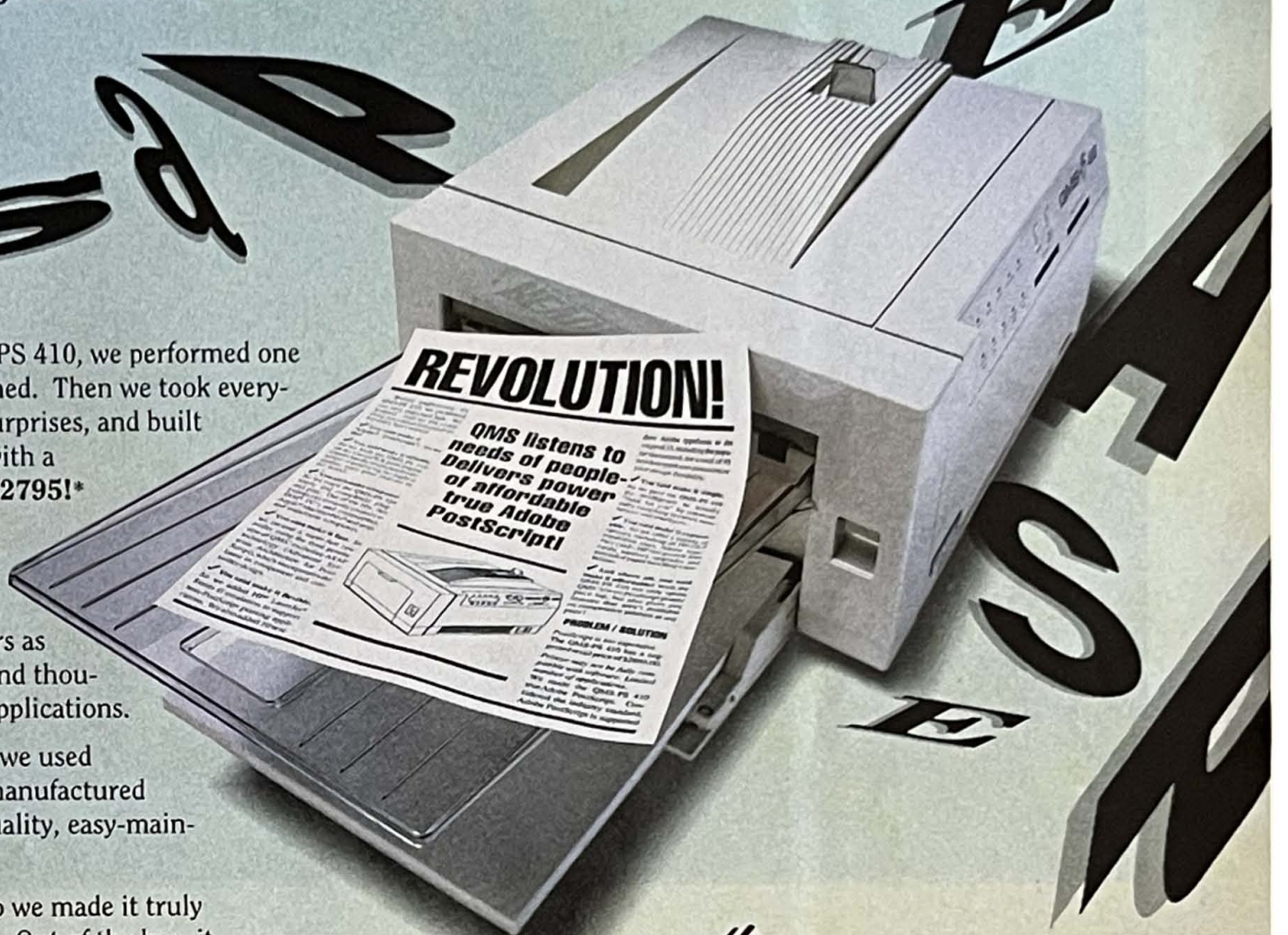

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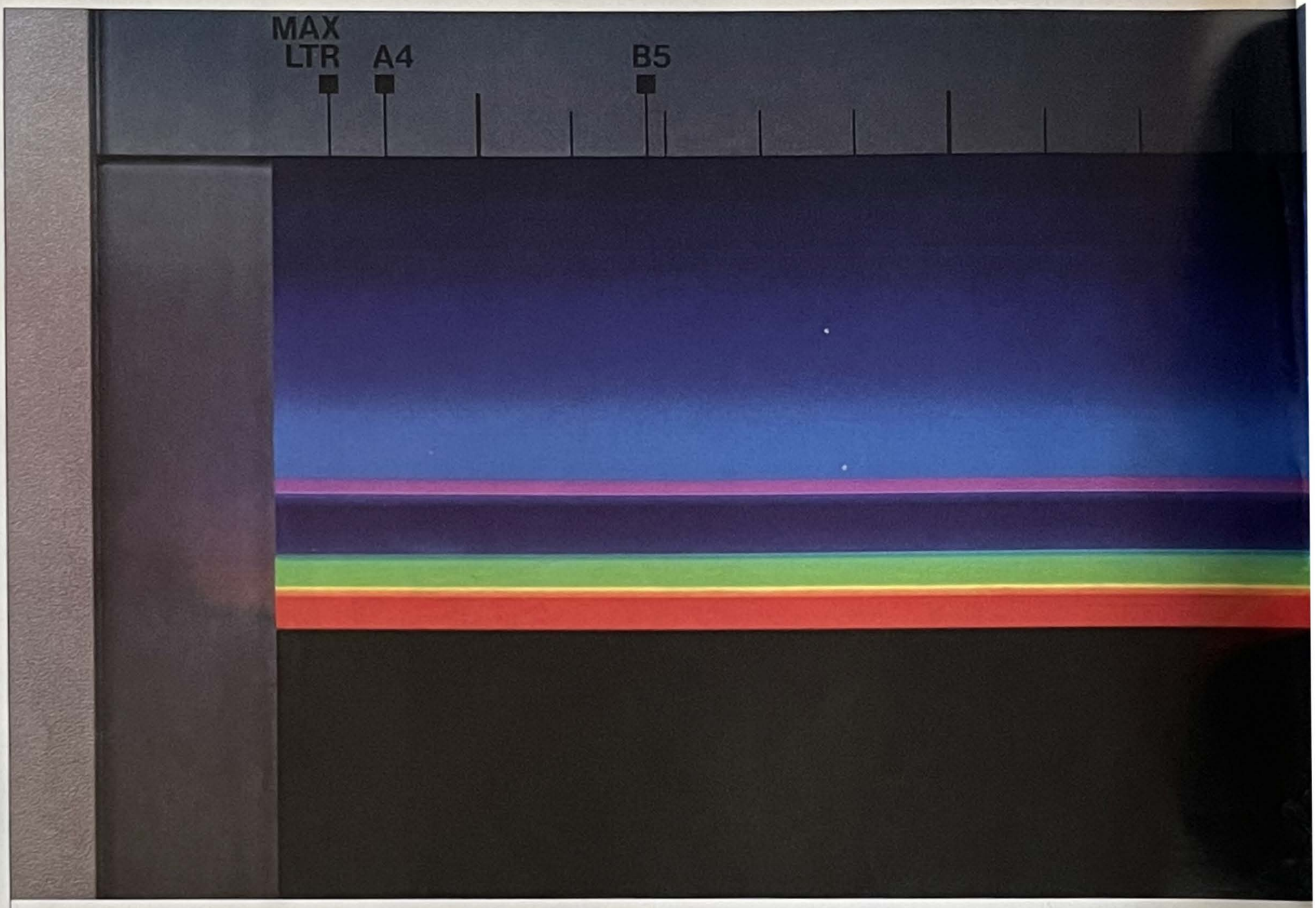
†Patent Pending



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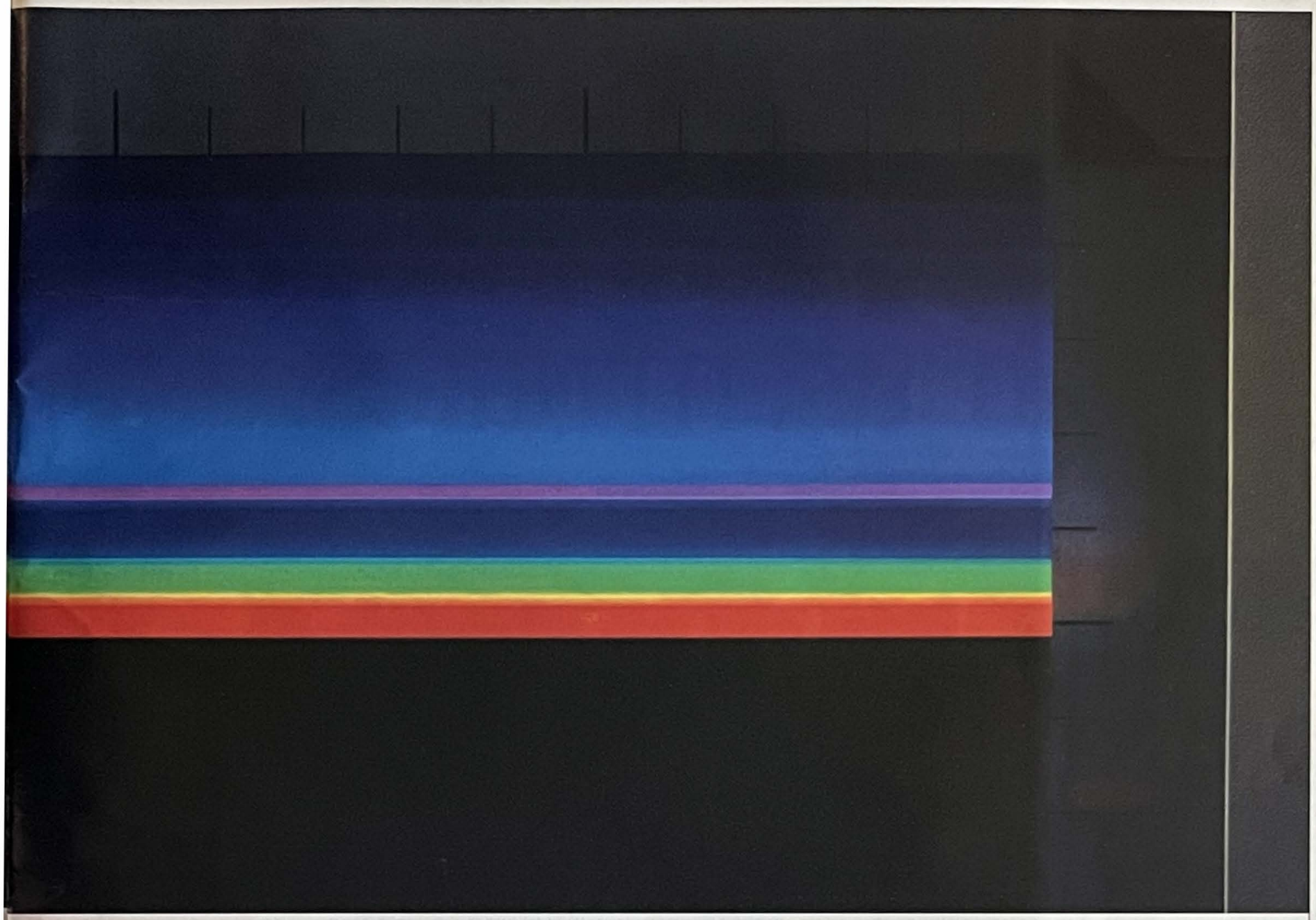

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adjusted between 50 and 600 DPI to optimize output from any printer, or to any monitor. Compatibility is assured with a choice of easily installed Macintosh® or MS-DOS® interface kits, featuring the latest industry-leading scanning and editing software.

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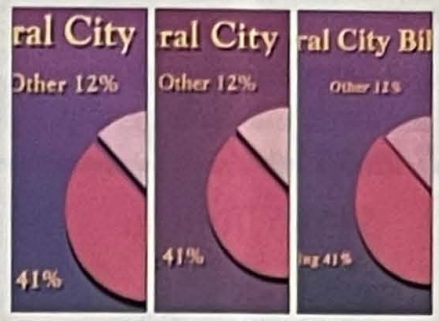
7 August 1990



Slide presentations: Should you send it out to a service bureau or buy an in-house film recorder?
See Page 81.

Designers go back to the classroom to bone up on the technology.
See Page 84.

Lack of tools, content conspire to keep multimedia a buzzword

By Connie Guglielmo

Beverly Hills, Calif. — Despite the variety of multimedia-related products that have been released or announced during the past year, several technological and legal obstacles still prevent multimedia publishing from becoming the next great market opportunity for the Mac. And until those obstacles are dismantled, according to multimedia developers attending Seybold Seminars' Digital World conference here in June, multimedia will remain a buzzword.

On the legal side. Content — and who controls that content — is still the key to multimedia publishing, according to representatives from Apple, The Voyager Company of Santa Monica, Calif., and New York-based ABC News InterActive.

Scott Mize, Apple's multimedia content evangelist, defined the new breed of media producers as creative professionals from the film, video and audio worlds who will form "a new type of collaboration" to produce interactive multimedia titles.

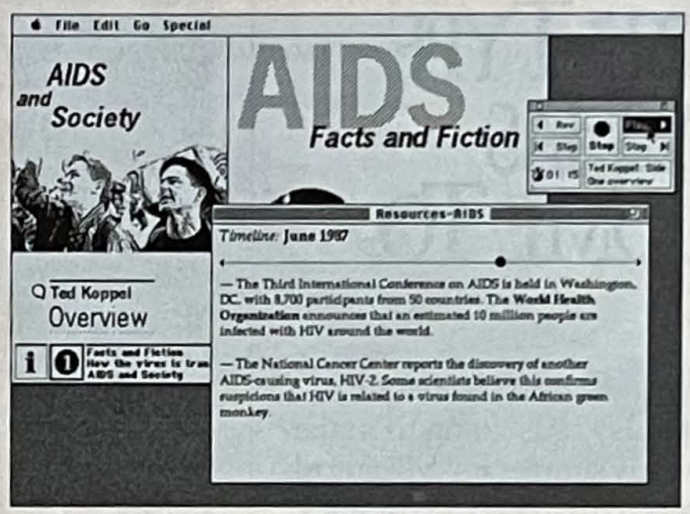
But multimedia producers probably will fall into two groups when it comes to content: the haves and the have-nots.

One "have" is ABC News InterActive, a division of the TV network specially formed to produce interactive videodiscs for the education market. During the past year, ABC has released several HyperCard-driven discs, including "The '88 Vote: Campaign for the White House," "In the Holy Land" and "Martin Luther King Jr." Later this summer, it will release a disc about AIDS.

The reason ABC could set up the division was because it already owned vast archives of film footage. And because the network is in the business of producing visual news, it already has the facilities and resources to produce videodiscs, according to Executive Producer David Bohrman. "The hardest part of what we're doing is conceptualizing what should be within this limited amount of space [on the videodisc]," Bohrman said.

But for the "have-nots," multimedia pub-

See Multimedia, Page 78


File Edit Go Special
AIDS and Society
AIDS
Facts and Fiction
Resources-AIDS
Timeline: June 1987
Ted Koppel
Overview
— The Third International Conference on AIDS is held in Washington, DC, with 8,700 participants from 50 countries. The World Health Organization announces that an estimated 10 million people are infected with HIV around the world.
— The National Cancer Center reports the discovery of another AIDS-causing virus, HIV-2. Some scientists believe this confirms suspicions that HIV is related to a virus found in the African green monkey.

Moving in the realm of the "haves" of multimedia, ABC InterActive created its HyperCard 2.0-driven, educational videodisc about AIDS using the media giant's amazing resources.

Thermal transfer, inkjet advances put color in new light

By Clay Andres

San Francisco — While everyone is waiting for a low-cost color laser printer that's just like their LaserWriter, prices on thermal-transfer printers are dropping, and the quality of inkjet technology is improving — enough so that graphic artists and designers need no longer assume that they must spend $7,000 to $10,000 for a thermal-transfer printer or $50,000 to walk out of a store with a Canon Color Laser Copier 500 printer.

Thermal transfer today, inkjet tomorrow. Marketing has positioned thermal-transfer printers as high-end devices for graphic artists and has relegated inkjets to the low end of color production, including office presentations. But those marketing positions are changing as the technology advances.

Already, Howtek Inc. of Hudson, N.H., has addressed the issue of low-resolution quality on inkjets with its announcement of a 300-dpi color printer for release this fall. Canon U.S.A. Inc. of Lake Success, N.Y., is expected to show its 300-dpi engine at Comdex Fall/90 this November in Las Vegas, and Hewlett-Packard Co., the inkjet leader, is rumored to be waiting for the right moment to bring out its own 300-dpi model.

In addition, the current drivers from Palo Alto, Calif.-based HP and Tektronix Inc. of Wilsonville, Ore., are addressing the problem of image banding, which turns out to be more of a software problem than an inkjet hardware problem. Also, printing speeds continue to improve, although no one expects them to equal thermal-wax speeds soon.

If the price is right ... Price is the big advantage of inkjets. "Printers like HP's PaintJet will likely fall to $1,000, while 300-dpi models with faster speeds will come out around $2,500," said Greg Porell, director for color hard copy at BIS CAP International/Datek Information Services Inc. of Norwell, Mass. "With good-quality text, it's almost a dual-function device. It will provide a nice alternative to traditional black-and-white laser printers for people who want to integrate color into documents."

See Color printers, next page

It's a Sunday of delights with El Sol's family-entertainment package. For $1.25, readers of the new Mac-produced Madrid daily receive a serial comic book; three recipes; a word game and puzzle book; an excerpt from a serialized novel in Spanish with the English translation on tape; and, of course, a newspaper. Grupo Anaya, creator of El Sol, produces the newspaper on 130 Mac IIcx machines, using QuarkXPress 3.0, Adobe Photoshop and Illustrator 88, Claris' MacWrite II, Baseview's wire text software, the Nikon Picture Desk System, ACIUS' 4th Dimension and Software Ventures' MicroPhone.

Start-up Madrid daily stakes it all on Mac

By Janice Maloney

Madrid, Spain — A new sun is rising in Spain. El Sol, a 3-month-old newspaper produced entirely on Macs, is casting a long shadow on an industry skeptical of the Mac's capability to do rigorous, four-color, fully paginated daily newspaper production.

The $2.5 million start-up, published by Grupo Anaya, Spain's largest publisher, hit the newsstands May 22, less than a month after its first production dry run. With a circulation of 100,000, the smartly designed tabloid is already vying for the No. 2 spot in Madrid's newspaper market.

The paper has received much acclaim for its innovative look. Created by Mac design pioneer Roger Black, the daily has an outstanding graphical impact, which can be seen in such elements as its centerfold, a citywide map created in Adobe Illustrator that locates

See El Sol, Page 78

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Manufacturer	Model	Price	Technology	PostScript	Resolution	AppleTalk
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Sharp	JX-730	$2,195	Inkjet		180	
Tektronix	ColorQuick Ink-Jet	$2,495	Inkjet		216	
Hewlett-Packard	PaintJet XL	$2,495	Inkjet		180	
Hewlett-Packard	PaintWriter XL	$2,995	Inkjet		180	•
Howtek	Personal Color Printer	$2,795	Inkjet		300	
CalComp	ColorMaster	$4,995	Thermal wax		200	
Lasergraphics	CPS	$4,995	Thermal wax		200	
CalComp	PlotMaster	$5,595	Thermal wax		200	
Mitsubishi	G370-10U	$5,695	Thermal wax		300	
Howtek	Pixelmaster	$5,995	Thermo-Jet		300	
Seiko	ColorPoint PS Model 4	$6,999	Thermal wax	PhoenixPage	300	•
Tektronix	Phaser PX	$7,995	Thermal wax	Tek	300	•
Océ	OcéColor	$8,990	Thermal wax	Adobe	300	•
NEC	Colormate PS	$9,995	Thermal wax	Adobe	300	•
QMS	ColorScript 100 Model 10	$9,995	Thermal wax	Adobe	300	•

Color printers

From previous page

QMS Inc. of Mobile, Ala., and NEC Technologies Inc. of Wood Dale, Ill., both now offer thermal-transfer printers for less than $10,000. Included with its $9,995 price tag, QMS has added a full 8 Mbytes of RAM and improved the warranty on its PostScript ColorScript 100 Model 10. NEC's ColorMate PS is configured similarly to the QMS but claims the advantage of longer-lasting drop-in ribbon cartridges and a larger service network. The $9,000 OcéColor printer from OcéGraphics USA Inc. of Mountain View, Calif., not only is the lowest-cost Adobe PostScript model but is also much more compact than the other two.

For David Imanaka of Imanaka and Co., a communications design firm in Seattle, the $8,000 price of the Tektronix Phaser PX "was an easy pill to swallow," because it was just a little bit more than he paid for an original LaserWriter Plus.

When cost savings is not enough. "I saw some nice things printed out of PixelPaint Professional on the HP PaintWriter, but we needed PostScript compatibility," Imanaka said.

An Adobe PostScript controller may add $2,000 to $3,000 for additional hardware and licensing fees to the price of a thermal printer. To lower that price, companies such as Tektronix and Seiko Instruments USA Inc. of San Jose, Calif., use PostScript-clone interpreters, which are less expensive. Color printers that support PostScript are capable of working with AppleTalk.

This double advantage for thermal-transfer printers will change, however. Already, HP's PaintWriter has AppleTalk capabilities, and if you need to print PostScript, you can use a software interpreter such as Custom Applications Inc.'s Freedom of Press. It's slow but sufficient for occasional PostScript work.

The Phaser PX and Seiko ColorPoint PS series have the additional advantage of working with Macs and IBM PCs and compatibles. The ColorPoint actually has five inputs: two SCSI ports for a disk drive and scanner, an AppleTalk port, a parallel port for a PC, and a Centronics port for a workstation.

Filling in the future. It's likely that some inkjet manufacturer will package a printer with the same capabilities as current thermal-transfer printers: 300-dpi resolution; good color saturation with accurate color rendition; a built-in, PostScript-compatible controller; and an AppleTalk interface.

In addition to being less expensive, the output from this inkjet printer would be more aesthetic than that of thermal-transfer printers. The waxy ink and shiny paper of thermal-transfer printers looks glossy but sticks out in an otherwise laser-printed document; inkjet printers' matte, clay-coated paper calls less attention to itself. It's also likely that color inkjet printers will use plain office bond soon, though not for highest-quality results.

Thermal transfer looks better than inkjet. But while inkjet gets better, thermal transfer will get cheaper. However, just as a high-priced technology like thermal transfer has fallen in price, so will color laser printers.

Thermal transfer has looked better than inkjet and, until 300-dpi inkjets compete in the open market, will continue to. But while inkjet gets better, thermal transfer will get cheaper.

However, just as a high-priced technology like thermal transfer has fallen in price, so will color laser printers, according to Porell, who said he expects laser printer prices to fall from their current $50,000 level to $10,000 sometime between 1991 and 1992. □

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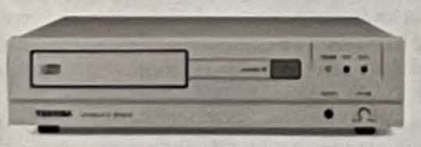

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1 *Genuine Adobe® PostScript.® You need a true Adobe PostScript printer. The Silentwriter2 290 printer from NEC. Some companies emulate PostScript with clone interpreters or add-on cartridges. Others have limited font capabilities. But that's not the way to produce eye-popping newsletters, or 3D charts. We've known this since we introduced our first Silentwriter LC 890 printer back in 1987.*

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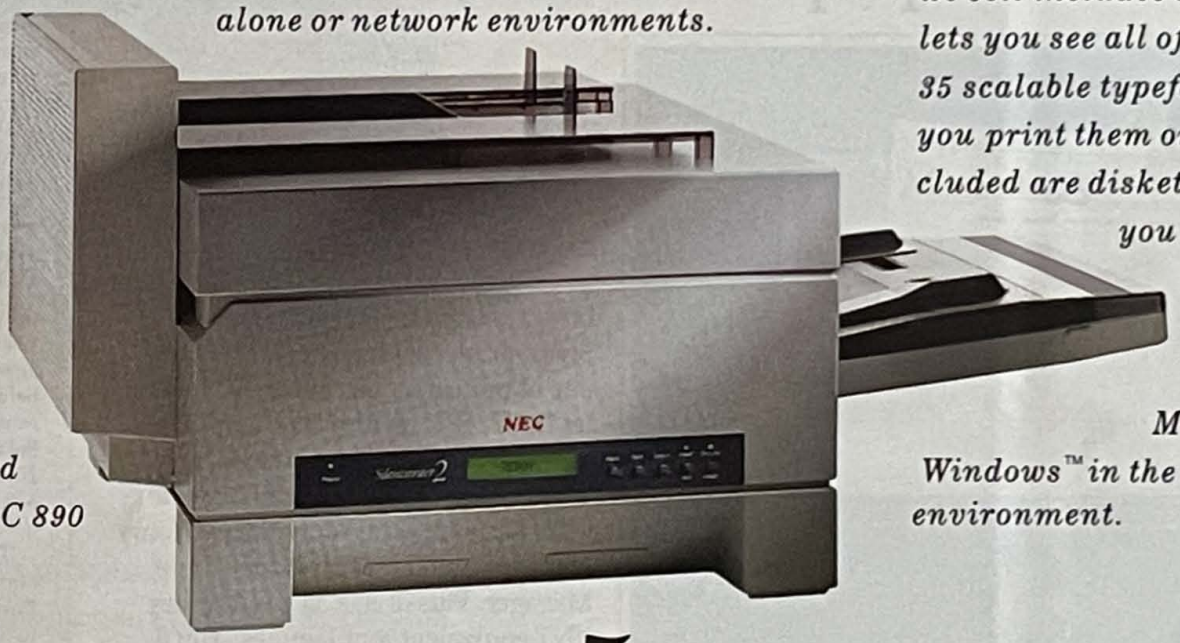

3 *WYSIWYG Screen Fonts. As in What-You-See-Is-What-You-Get. Our printer support kit included with every 290 we sell includes software that lets you see all of the printer's 35 scalable typefaces before you print them out. Also included are diskettes that allow you to install the fonts on any Macintosh or under Microsoft® Windows™ in the MS-DOS environment.*

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Multimedia

From Page 75

lishing can be a nightmare. Acquiring the rights to a film clip, a photograph or a piece of music, and negotiating licensing fees for distribution sometimes can make projects impossible.

Voyager President Bob Stein, whose company distributes laser discs and CD-ROMs, discussed his company's efforts to license a few minutes from an old MGM film. "Basically, they told us that the licensing fee wouldn't cover their legal expenses to work out a license agreement. The single biggest barrier to multimedia publishing is to figure out what the material is worth in this new medium," Stein said.

On the tech side. Apple's multimedia push leans toward turning average Mac users into producers of their own presentations. To make that happen, users need tools that allow them to handle sound and video as easily as text and graphics. Some of these tools will be built into future Mac operating systems, while others will be developed by third parties. Both types of tools are being worked on now and should make their appearance within the next year.

Tyler Peppel, Apple manager of the Media Integration Products Group, talked about future operating systems that can handle not only multiple data types but also time-based events, so that the data can be synchronized in a presentation.

As part of its commitment, Apple is readying QuickTime, a multimedia document architecture that will provide developers with standard interfaces for controlling media devices such as videotape recorders and CD-ROMs as well as for communications between various media data types. It is due out this year.

Apple also is investigating video compression technologies (see "Coping with the size, speed of video data," MacWEEK, July 31).

On the software side, both Farallon Computing Inc.'s Kubrick and MediaMaker from Max Whitby, director of the London-based MultiMedia Corp., which will be published by San Francisco-based MacroMind Inc., are due this year. Each is a low-cost application that lets users manipulate video using point-and-click editing.

"Tools for professionals are a good thing," Peppel said. "But tools for individuals are the next frontier."

While not every Mac user will want to become a multimedia producer, the multimedia technology is pushing users toward new ways to communicate with their computers — from sound-annotated files to complex, hypertext-based applications.

Said Mize, "What we see is the computer as media — being used as both a communication and a publishing medium." □

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El Sol

From Page 75

daily events around town.

But what makes El Sol more interesting to newsrooms around the world is what lies behind the printed page. Breaking with conventional newspaper-production systems, El Sol is published on 130 Mac IIcx machines, 15 of which are dedicated file servers. The Macs are networked onto a single Ethernet network with several AppleTalk subsegments.

This unconventional network has never crashed once, nor has any of the servers, in three months of non-stop use, according to Steve Schaffran, president of The Color Group of Richmond, Calif., and a spokesman for El Sol.

Grupo Anaya has made a tradition of breaking with convention. Under the leadership of Germán Sánchez Ruipérez, Grupo Anaya founder and president, the publishing house started experimenting with color on the desktop in 1987 and developed Flamenco, the non-traditional desktop color-separation software that eliminates moiré patterning. The Color Group distributes Flamenco in the United States.

Ruipérez and Marcel Coderch, president of Anaya Systems, a subsidiary of Grupo Anaya, made the decision to produce the paper exclusively on the Mac. Gary Cosimini, the senior art director of operations and technology at the New York Times, provided consulting services on system design, layout and graphics.

Unlike newspapers produced with Atex or comparable systems, writing, editing and proofing, in addition to design and layout, are all done on the Mac by teams assigned to specific pages. "El Sol makes their paper the way Volvo makes cars," Schaffran said. "Each team is responsible for their own output and quality control."

The teams output their work using one of four Varityper 4300B or four Linotype L-300 imagesetters running on RIP 4 machines.

"Anaya believes the network performance is one of the great benefits of a 100 percent Mac decision," Schaffran said. "Sure, you can cobble different platforms and different network protocols together, but reliance on a single Mac family and single standard is the foundation of reliability." □

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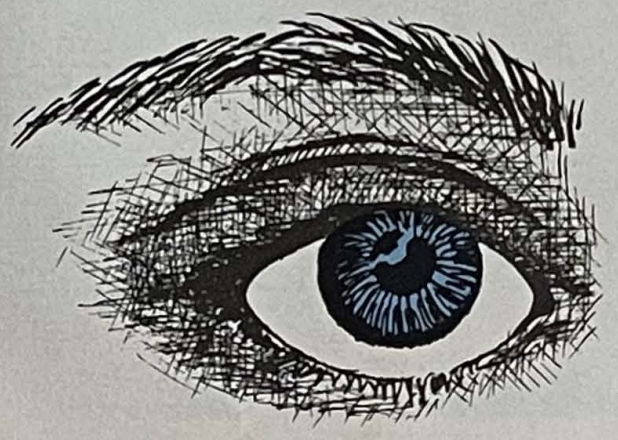

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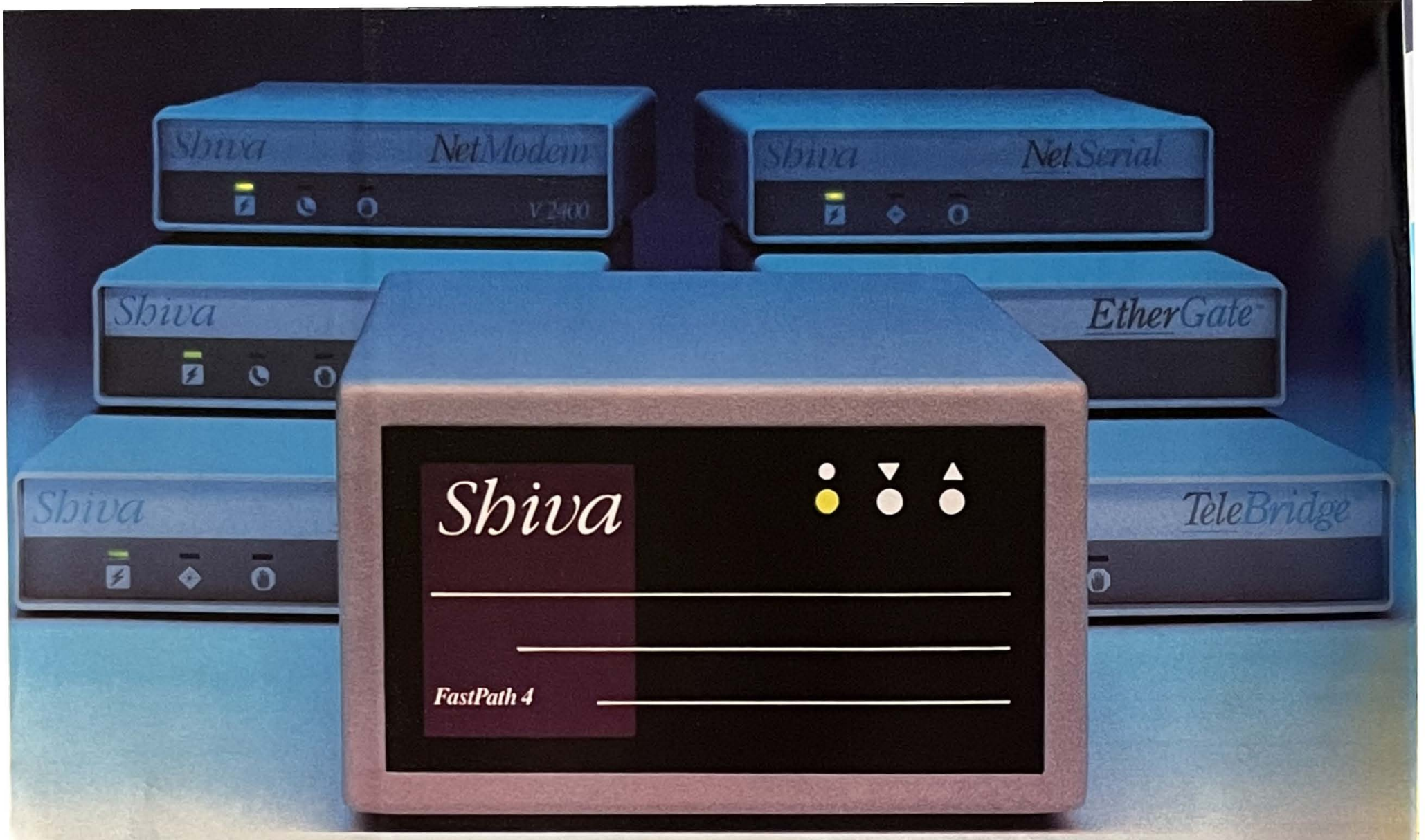

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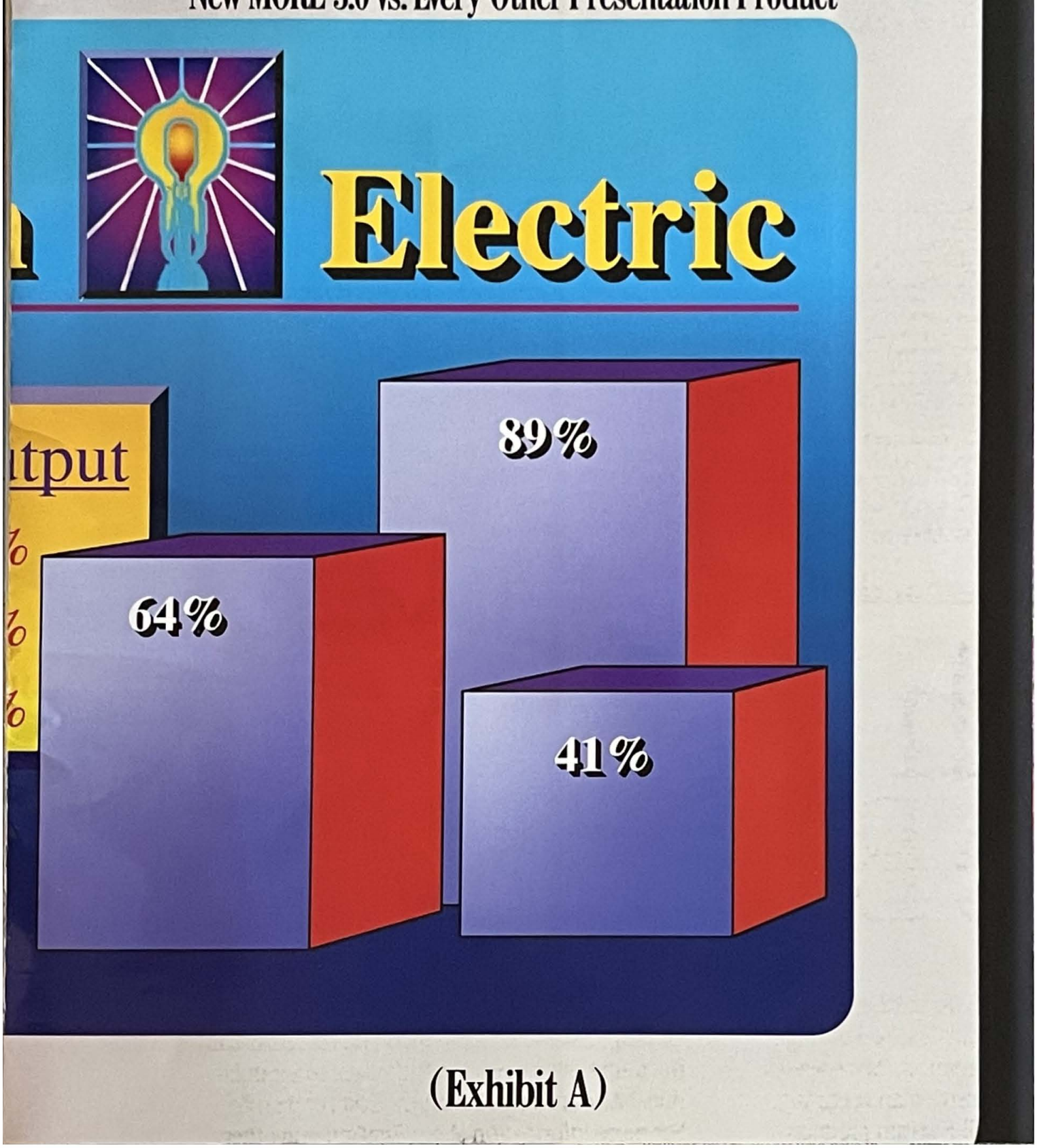
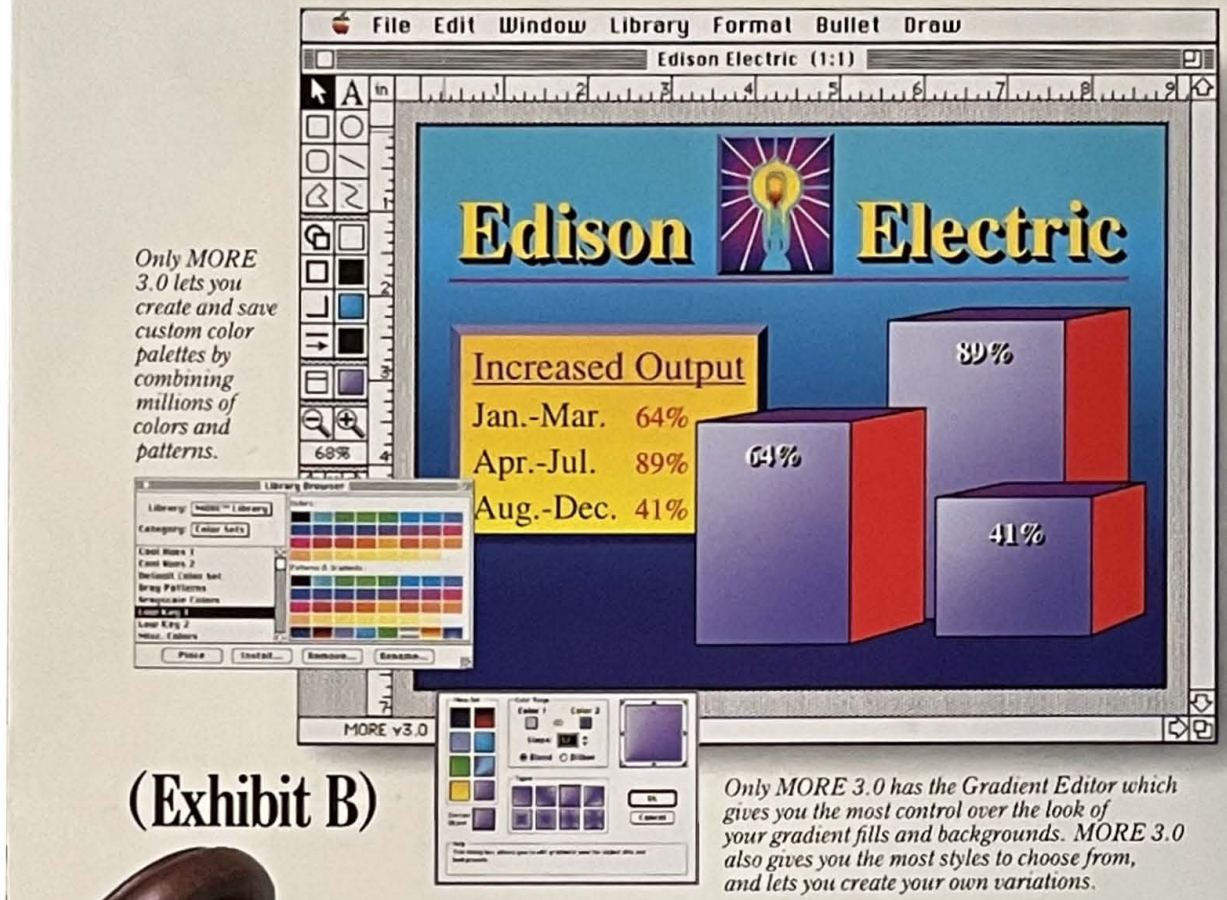
The Trial:

New MORE 3.0 Vs. Every Other Presentation Product



(Exhibit A)

Examine The Evidenc



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(Exhibit B)

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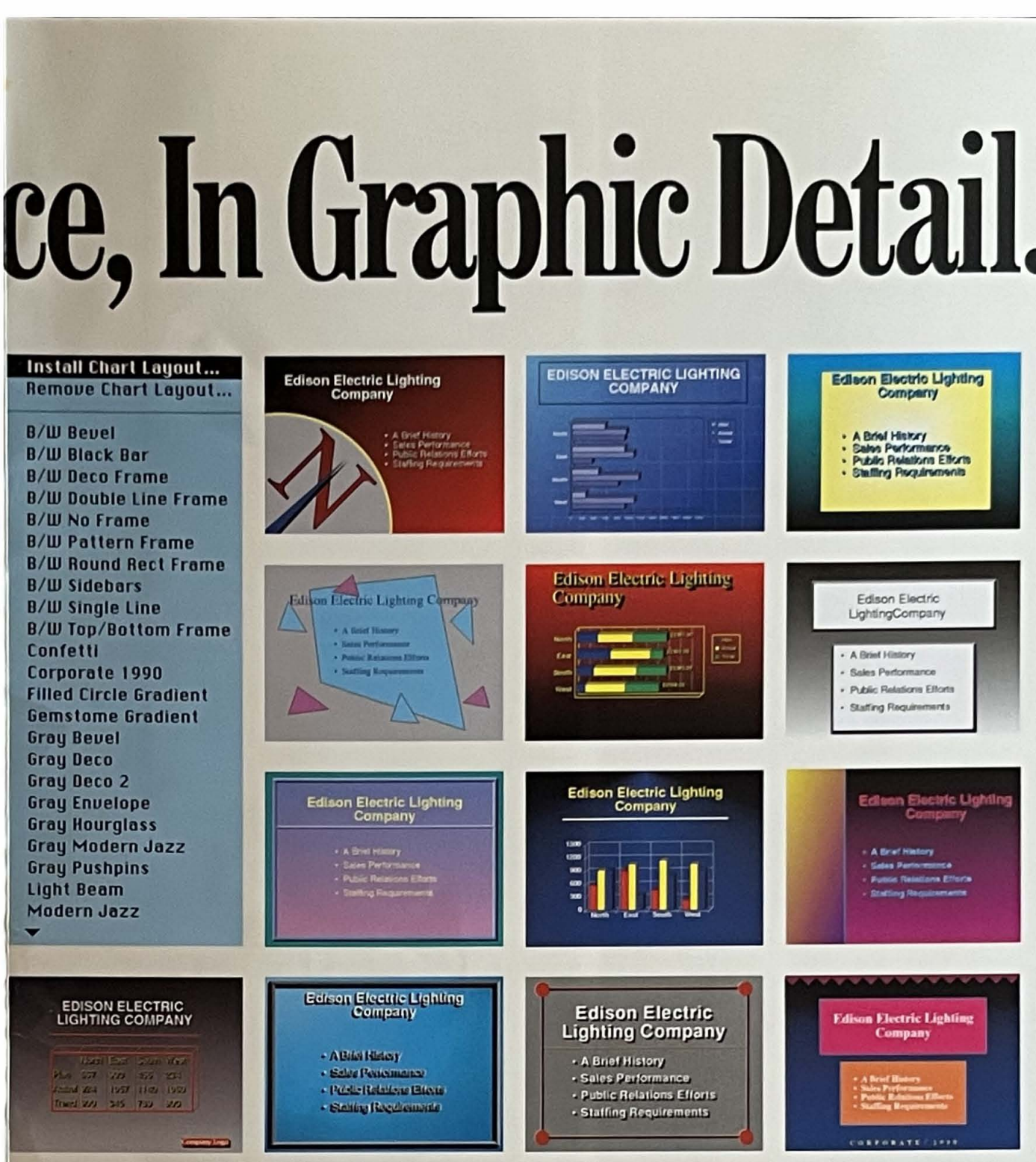

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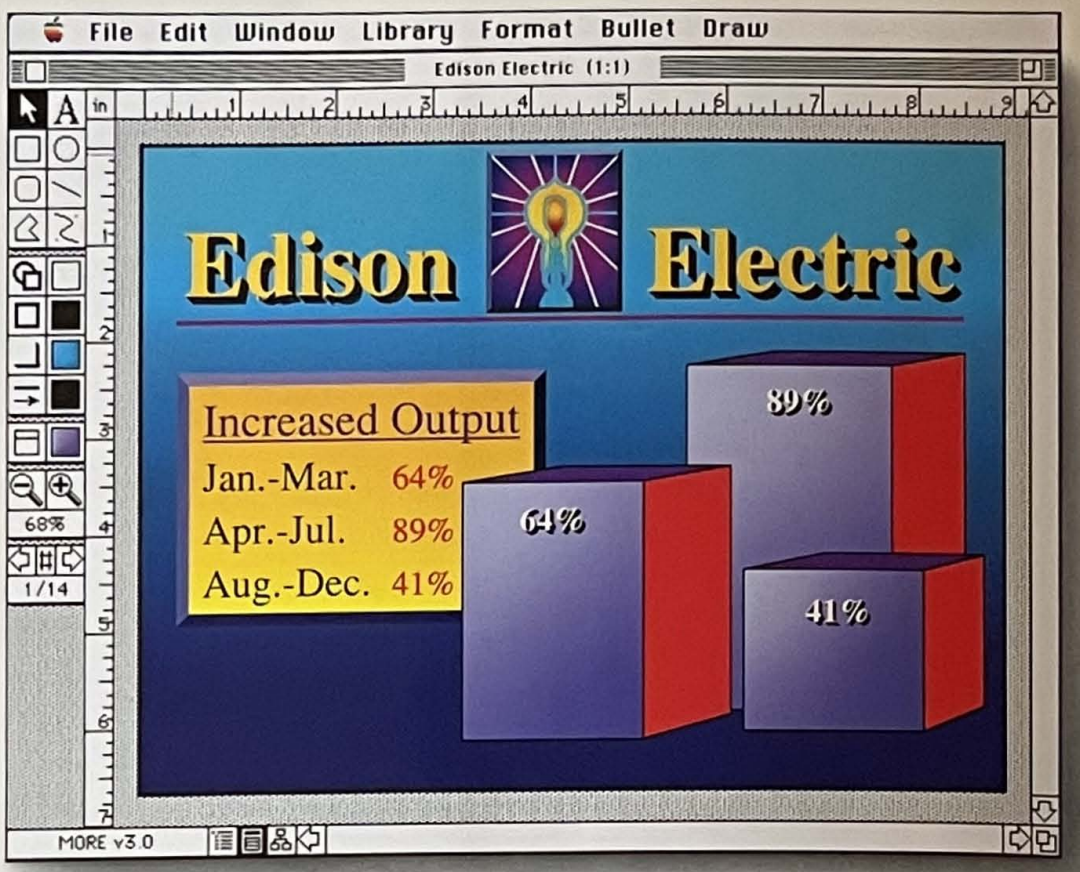

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Does it pay to purchase a dedicated film recorder?

As businesses rely more and more on slide-based presentations, they must determine their hardware needs.

By Dona Z. Meilach

While a good video or animated multimedia presentation, with all its flash and cutting-edge Mac technology, can be very effective when presenting to an audience, slide-based presentations still require less time to create, and if done correctly, are a powerful information medium.

"There are an estimated 10 million frequent presenters in the United States who produce 500 million business slides annually," said William Coggshall, president of Desktop Presentations Inc., a Mountain View, Calif.-based marketing and research company that specializes in presentation graphics. "Our surveys show that computer-generated 35mm business slides will increase from 134 million in 1988 to nearly 340 million in 1993."

For Macintosh users planning to add to those numbers, there are a variety of straightforward presentation programs — Aldus Persuasion, CA-Cricket Presents..., Microsoft PowerPoint, MORE 3.0, Visual Business Systems #5 — and various charting software that make professional-looking slide shows on the desktop possible.

On the hardware side, however, the issues become more complex. The market for high-end and desktop film recorders has exploded, and it is no easy task figuring out when it pays to purchase a dedicated film recorder, what type of unit is right for your presentation needs and when it's smarter to use a service bureau.

Slides from the desktop. Like printers, film recorders process images. Instead of outputting to paper, though, these units turn files into slides, instant prints or overheads, depending on the camera that's attached and the film that's loaded.

Having a film recorder in-house can pay for itself when slide volume warrants it and time and staff are available. For instance, if you need to image 36 files, your up-front costs with an in-house, dedicated system include only film and developing, a total expense of about $20 per role, or about 55 cents per slide. At a slide-making service bureau, however, you would pay from $5 to $25 per slide. At the lowest price, you would pay about $180, plus shipping costs, for a role of 36 images. (See chart, Page 86.)

But before you rush out to buy a film recorder, be aware that other costs are involved. While the average price of a film recorder can be potentially amortized in a year, you would need to do 40 presentations of 36 slides each, or 1,440 slides, to pay for a $7,200 unit. In addition, you will need someone to run the film recorder. It takes time to set up files for imaging. In fact, some units require 20 minutes or longer to shoot one file. And if you want PostScript capabilities, you must factor in an extra $500 for compatibility software. Other typical considerations include depreciation, space, overhead, service, personal energy and anxiety. And, finally, slides produced on desktop systems fall short of the image quality and color of more-expensive systems used by service bureaus.

It does not have to be an either/or type of question, however, according to Jerry Cahn, president of New York-based Brilliant Image Inc. "A desktop film recorder makes sense if you do lots of in-house, peer-level presentations, and maybe a few professional-quality ones," he said, adding that an in-house system provides users with complete control and privacy of their data.

But many Mac users with dedicated film recorders will still need a service bureau for backup. "Brilliant Image clients who have in-house systems supplement them when their workload is greater than they or their camera can handle," Cahn said, explaining that they use the service when their film recorder breaks or when they're working feverishly to create the slides and can't worry about film-recorder failure. Also, many presentation makers use a service when they need higher-quality slides for important presentations.

Heavy hitters in the slide-making market. Companies that produce upward of 10,000 slides per year are candidates for higher-priced cameras, such as the Imapro from Imapro Corp. of West Nyack, N.Y.; QCR-Z and Forte from Agfa Matrix of Orangeburg, N.Y.; and Solitaire from Management Graphics Inc. of Minneapolis.

See Slide shows, next page

Tips for top presentations

Planning: State your premise, promote it, summarize, then suggest the action your audience should take.

Consistency: Keep slide layouts, colors and fonts consistent.

Line lengths: Use a maximum of six lines per slide, six words per line.

Type size: Two-thirds to three-fourths of a slide should be text. Use a point size large enough to be seen at a distance.

Aesthetics: Order line lengths beginning with the shortest line of text and graduate to the longest line.

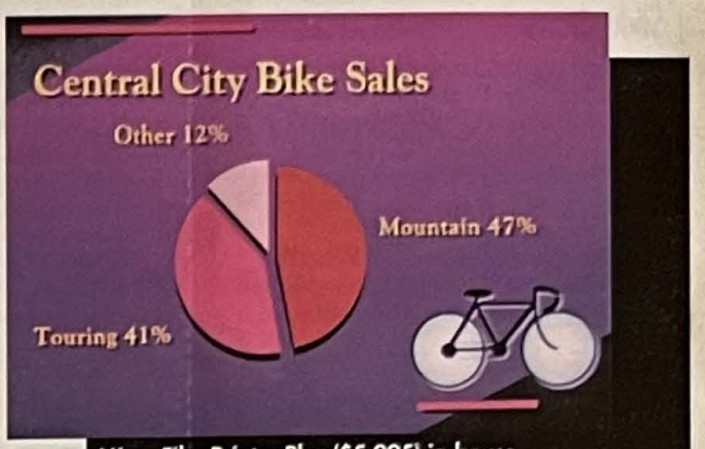
Focus: Keep data charts uncluttered. Show trends rather than finite detail.

Bright colors: Put important message elements in the lightest colors, such as white or yellow. Use less-bright colors, such as light blue or light orange, for titles and less-important messages.

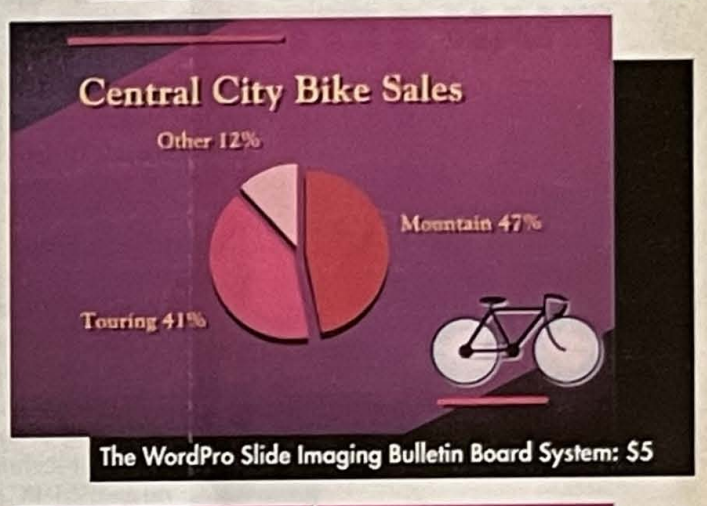
Background color: Use high-contrast colors. Backgrounds that graduate from medium to dark blue or medium to dark green work well.

Placement: Logos should be subtle and always in the same position.

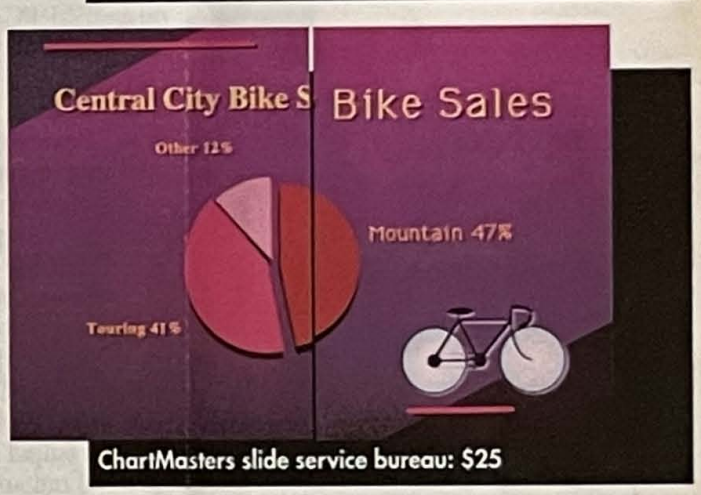
Delivery: Visuals are support, not the whole show. Polished podium techniques, delivery, and your interaction with your visuals and with your audience are all essential to a successful performance.



Mirus Film Printer Plus ($5,995) in-house



The WordPro Slide Imaging Bulletin Board System: $5



ChartMasters slide service bureau: $25

To sample output from different film recorders, MacWEEK sent the same slide created in Aldus Persuasion 2.0 to our in-house film recorder; WordPro, which uses Agfa's $36,995 Forte; and ChartMasters, which uses Celco Constantine Engineering Labs' Celco Professional Color Film Recorder priced at about $60,000.

The slide was designed to encompass problem areas in slide making, including stair-stepping, banding and color matching. Our quality-indicating elements included the use of a serif typeface, Gaudy, which tends to show jaggies, geometric figures, subtle color gradation in the background and slight variations in hue on the pie chart.

While turnaround time in each instance was less then 24 hours, cost and convenience became the significant differentiating factors.

The Mirus setup was fairly straightforward, requiring about a half hour; in addition, it took 13 minutes for processing and then the film was sent to a developer. With WordPro, it took about 20 minutes to send the file and font by modem. For ChartMasters, we had to use the Autographix driver that comes with Persuasion 2.0 to make a print file. We had to use AGXit! for the telecom software. We spent several hours getting the already-created slide into ChartMasters' required format.

The first slide we received from ChartMasters (shown on right-hand side) was bit-mapped because the font used was not compatible with the bureau's hardware. The slide was then redone at MacWEEK in Times and resent. The final process at ChartMasters took one minute, 30 seconds for imaging and 10 minutes to rasterize because of radial fills.

For more on presentations — Go to Page 99

Slide shows

From previous page

These units run in the $15,000 to $40,000 price range. "But be prepared for extra costs," said Timothy Mueller, a partner at Nextwave Productions of New York. Maintenance contracts are essential for these machines, and they run 10 percent of the cost of the unit per year.

"When your company is producing that many slides, you're running into sophisticated files that contain more than your basic three-color bullet chart saved in a PICT format," Mueller said.

According to Mueller, people creating slides in volume will often combine a background from, for instance, Electronic Arts' Studio/8 with an image from Adobe Illustrator imported into a chart created in Aldus Persuasion. These type of files take time and expertise to produce and require someone on staff to keep up with and understand the technology.

"The Mac world is still young, with many different programmers who don't agree about finite details," Mueller said. "A service gains experience when it images files from different customers 24 hours a day. That experience is hard to duplicate in a company with a part-time or full-time employee who may operate the system only eight hours a day."

When to bring in PostScript.

Imaging PostScript files can be a headache, according to Juan Moreiras, service bureau manager at Nextwave, who added that about 75 percent of the PostScript files imaged at the service are fine. Maybe 10 percent of the problems are from imaging aberrations; the other 15 percent are user error. "Clients must be hand-held and trained to follow very specific suggestions," he said.

"People are yelling for PostScript imaging," said George Klein, president of Management Graphics. "It's overkill for most presentations, though it's warranted for publishing and color separations. PostScript files can be very large. One image could be 5 to 20 Mbytes. Just modeming that uncompressed file is costly; 1 Mbyte transmitted at 2,400 baud can take up to 60 minutes."

For Klein, the complications that arise from producing such a large file require that he adjust the bureau's charges. "A PostScript slide is $25, but if imaging is beyond 10 minutes, we charge a dollar per minute extra. Often, we'll image a file and it won't come out at all, and we won't know why," he said, explaining that it takes a lot of memory to convert a PostScript (vector) image to a raster image the recorder can understand.

Desktop units require hardware or soft-

See Slide shows, Page 86

Brilliant Image bureau: Agfa Matrix QCR-Z

Management Graphics Inc.: Solitaire

American Liquid Light: Verite

Facing the differences in film recorder output: Looking at the same PostScript slide output on three separate cameras all with 4,000-line resolution, we can see the differences in color and edge smoothness.

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Turning to training to keep up on Mac

To stay in step with computer technology, designers are looking to the classroom.

By Mitzi Waltz

The explosion of hardware and software tools that has thrust Macintosh-based systems into the realm of high-resolution color design and illustration also has shaken up graphic arts professionals looking to stay competitive.

To weather this technology boom, designers are turning to training programs that will help them master the Mac as they have the pen and Pantone. These training packages may send trainers to a site to conduct customized (and expensive) classes, or they may hold in-house classes and seminars that focus on specific tasks, such as producing newsletters or using a particular program. Programs available to the graphic artist include training in applications specific to systems as well as nuts-and-bolts, hands-on training.

Looking at the big picture. There are a number of well-known companies in the training field, including Electronic Directions Ltd., which specializes in publishing technology, and the Center for Electronic Arts, which focuses on computer graphics but also offers classes in multimedia, animation and desktop publishing (see list on Page 91 for additional resources).

For Peter Plante, a designer at the pharmaceutical company Merck, Sharp & Dohme in Philadelphia, TOTO Computer Graphics Inc. was the solution to his training needs. TOTO's trainers brought Plante's five-person department up-to-date on software such as QuarkXPress and Aldus FreeHand and provided tutorials on the company's Barneyscan scanner, its XP image-manipulation software, a Schlumberger color printer, and Apple's LaserWriter II and NTX. "I knew I wasn't always getting honest answers or good service from vendors," said Plante, whose department creates promotional materials and packaging. "TOTO came

See Training, Page 86

PHOTOGRAPH BY TOM PETERSON

Superimposed on the window in this classroom, is an example of a QuarkXPress file being put through its paces. This digital enhancement was created by MacWEEK Technical Manager Henri Froissart. QuarkXPress is a commonly taught program.

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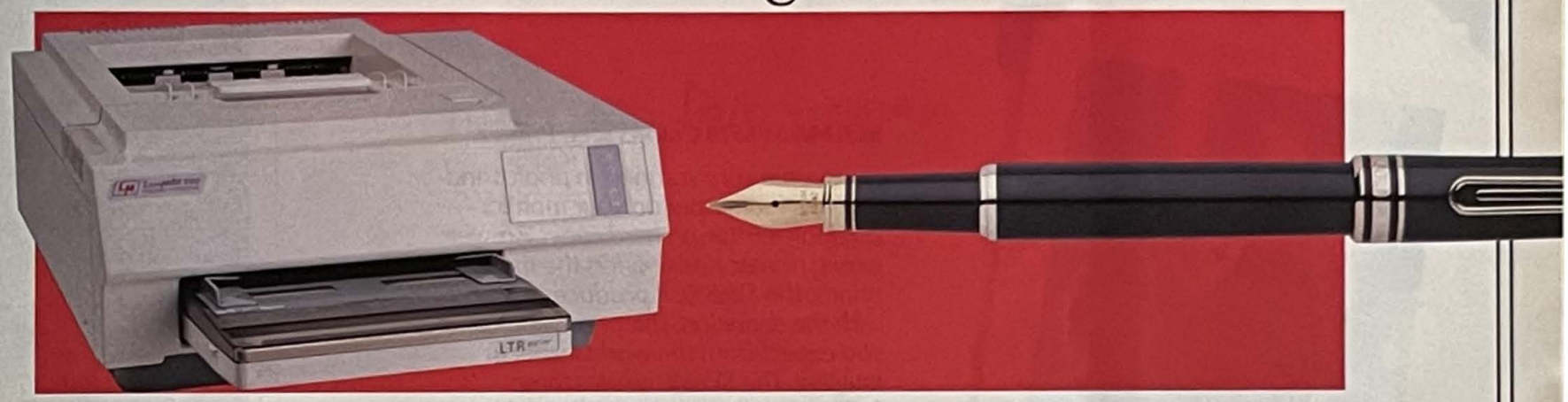

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Training

From Page 84

in to work one-on-one with each of us."

Another such company, Goodsight Graphics Inc., specializes in color training, from working with large color files to linking Macs with Scitex and Crosfield imagesetters. "What we want to do is integrate old-world color theory and how that knowledge needs to be applied to desktop systems that graphic designers are using today," said Robert Ozankan, Goodsight sales manager. Because Goodsight is equipped to offer pre-press and design services in the same facility where training will take place, "students will be able to see firsthand the result of the changes they've made on the computer screen," Ozankan said.

Getting down to particulars. If you need help with a specific program, contact the developer. Several major vendors, such as Aldus Corp., Quark Inc. and Letraset, can guide you toward training resources.

See Training, Page 88

Slide shows

From Page 82

ware, such as Billerica, Mass.-based Custom Applications Inc.'s PostScript language-compatible interpreter, Freedom of Press, to image PostScript files. High-end Agfa Matrix units need the Agfa Matrix ChromaScript converter hardware, and each application requires a unique setup. Solitaire uses VBS RIP (raster image processor) software. These add-ons are costly and increase slide-making time. The Solitaire also uses MicroSlide, a new rasterizing software driver, for PICT, PICT2 and Scrapbook files.

People who must store and transmit large, 24-bit PICT and TIFF files can now reduce their sizes. Rochester, N.Y.-based Eastman Kodak Co.'s Colorsqueeze image-compression software will compress a file up to 50 times. You can preview compressed files before selecting one to decompress. A 1-Mbyte PICT or TIFF file that takes 76 minutes to transmit will take only five minutes when compressed. The decompressed file is indistinguishable from the original, according to Kodak.

No matter what software you use, no matter what film recorder, the final success of a presentation rests on organization, content and delivery. Said Cahn, "First, focus your attention on getting the right software and hardware configuration for your needs. Become proficient at organizing, creating and delivering your presentations. Then determine if it makes sense to buy a film recorder. Even when you own a recorder, think of a service bureau as a business associate." □

The sliding scale

Some factors to consider when deciding whether to produce your slides on an in-house desktop film recorder or at a service bureau:

	IN-HOUSE	SERVICE BUREAU
Cost	55 cents per slide	$5 to $12 per slide
Control	Entire process under your control	Must rely on service bureau operator
Time	Staff person must spend an average imaging time of 15 minutes per slide; film will still need to be processed	Average turnaround time is 24 hours; pick-up and delivery
Quality	Good for peer-level presentations, some professional slide shows	Capable of producing high-quality, professional PostScript slides
Privacy	Control of data content in-house	Data no longer confined to your business

Product Info

The following companies produce Mac-compatible film recorders.

Agfa Matrix
(914) 365-0190

American Liquid Light Inc.
(213) 618-0274; (800) 828-9877

General Parametrics Corp.
(415) 524-3950

Imapro Corp.
(914) 353-4701

Lasergraphics Inc.
(714) 727-2651

Management Graphics Inc.
(612) 854-1200

Mirus Corp.
(408) 980-9770

N.I.S.E. Inc.
(213) 860-6708

Presentation Technologies Inc.
(408) 749-1959; (800) 782-2543

KODAK SV6510 Color Video Printer.

How come your scanned-in photos and graphics look super on your monitor—but look terrible on hard copy? Answer: wrong printer. Kodak offers the right printer, the SV6510. It produces prints with the definition, sharpness, and color you expect from the world leader in imaging. The SV6510 creates these brilliant continuous-tone prints with advanced thermal dye transfer technology and specially formulated KODAK EKTATHERM Media products. You get durable, 4 x 5-inch prints in about 90 seconds from video or digital signals. For information, including dealer locations, call 1 800 44KODAK (1 800 445-6325), Ext 110. In Canada, call 1 800 46KODAK, Dept 345.

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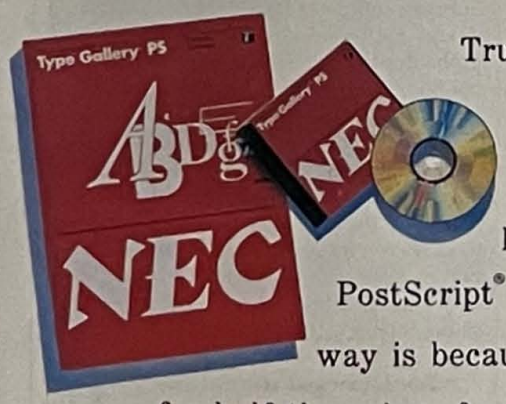


True, your problems would be over. But even if you haven't entered marital bliss as a person of leisure, does that mean you should deprive yourself of having over 500 typefaces right at your fingertips? At NEC, we think not. Which is why we do think Type Gallery™ PS is the perfect match for you. After all, these aren't just any fonts. You get over 500 Adobe® PostScript® language typefaces. All on one CD-ROM optical disc. But the reason rich people get that way is because they know how to spot a bargain. And once you see all the great typefaces you're getting for half the price of comparable diskette-based fonts, you'll realize there's no better deal anywhere. It's just one of a whole family of CD-ROM desktop publishing libraries from NEC. Everything from stock photography to line art. Each IBM or Mac compatible. For product literature call 1-800-826-2255. Because if you really do love type like you say you do, Type Gallery PS will help you live happily ever after. ♥

C&C Computers and Communications

NEC

Training

From Page 86

Quark Inc. offers limited on-site training as well as a network of 120 authorized trainers. "We provide training for one administrator, and we can negotiate from there," said Peter Warren, Quark director of marketing and communications.

Training, which is handled by Quark's technical support personnel, may occur at the customer's site or at Quark's Denver headquarters, where it has a training center for 30 students.

Quark has created a three-volume set of manuals for authorized XPress trainers. If there is no authorized center near your company, you can buy the manuals and use them to train your staff yourself, Warren said.

Aldus has more than 100 authorized trainers, ranging from consultants to colleges. "We look for people who are already proven trainers on Aldus products," said Craig Danuloff, who manages the program for Aldus. The company insists that authorized trainers fulfill a number of requirements, including offering small hands-on classes and using either Aldus' own curriculum or an approved substitute.

One such authorized training center is The Dotson Institute, which is based in Seattle but also has a facility in Chaska, Minn. The company offers classes on "absolutely every program in common use — including all desktop publishing packages, Adobe Illustrator, Aldus FreeHand and Persuasion," said Nathan Everett, the company's director of training. It

See Training, Page 90

Choosing the right training program for your company

Finding a training method that will work for you or your staff isn't always easy. There are a few guidelines you can follow in choosing a training experience; while they won't ensure perfection, they may prevent you from making a choice you'll regret later.

▸ **Look at your people.** Do you need to bring beginners into the computer age, or does your staff already have Macintosh basics down pat? Beginners may need the handholding that one-on-one instruction can provide, while more-experienced users may get what they need from a one-day seminar.

Consider the personality factor, too. Outgoing employees probably can hold their own in a group environment, while shy types will need more personal attention.

▸ **Look at your budget.** While bringing a consultant to your site is the ultimate in training, it's an expensive proposition. Some classes can be pricey, too.

For administrators who need to train an entire department, you may want to send one employee to a high-priced class and have that person bring the knowledge back to the rest of the staff.

Or you may want to save individualized instruction for only a few advanced subjects, using less-expensive resources for the rest. Some training companies offer group discounts when a company sends more than one employee — be sure to ask.

▸ **Spend carefully.** Before hiring a trainer or paying for a class, check references and be sure the program will cover your needs.

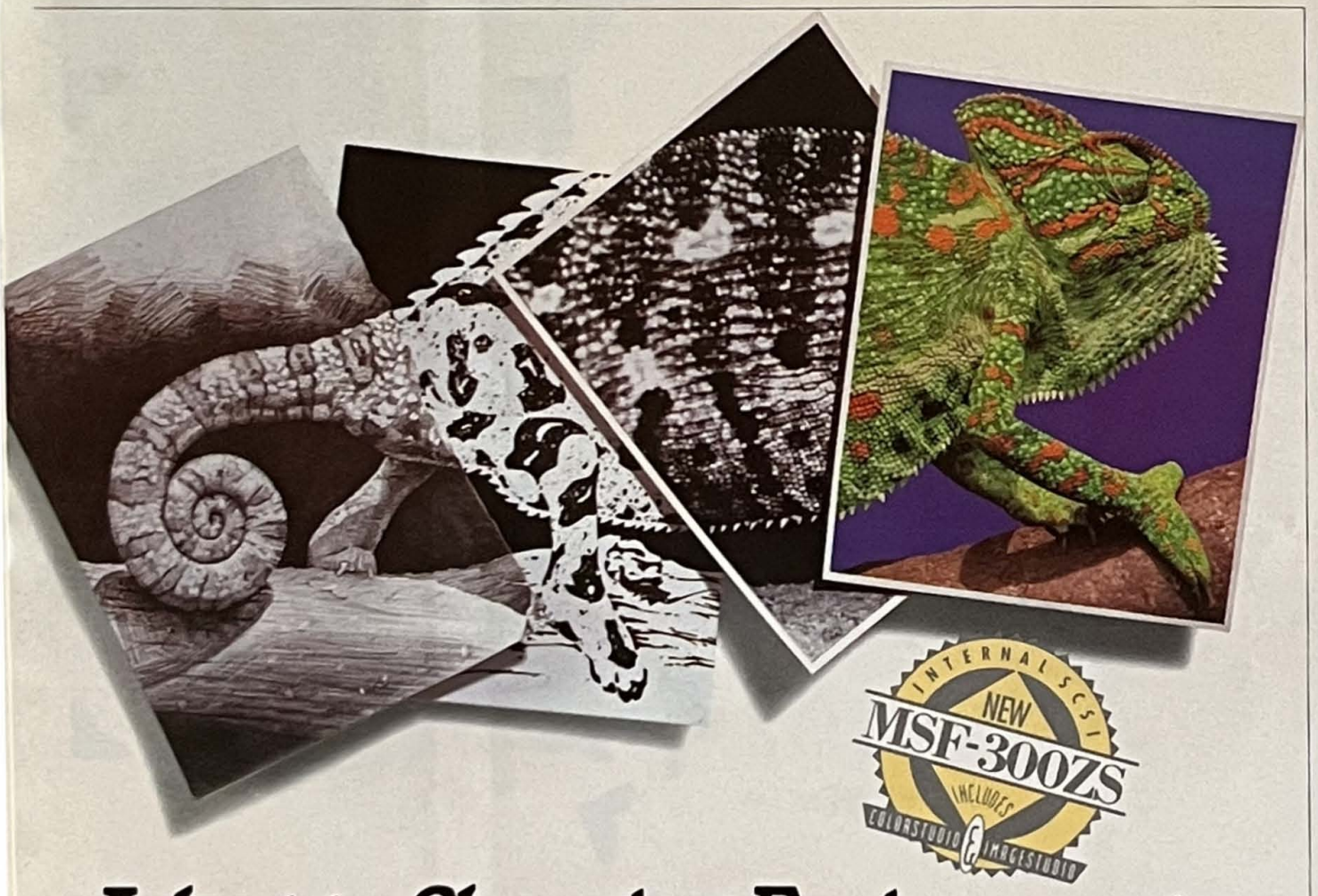
▸ **Look at the alternatives.** Ser-vice bureaus, computer stores, user groups and professional organizations probably offer the least-expensive training options. The level of expertise can vary, however.

One easily overlooked resource may be right under your nose. Are there graphic designers in your community who show a flair for using the Mac? They may be able to point you toward top-notch training or may even be willing to show you what they know at a lower price than a professional trainer.

▸ **Look toward the future.** Keep on top of the trends in computer-aided graphic design by reading computer and graphic arts publications. Check out local Mac user groups for others in your field who are using this new tool.

Encourage your staff to experiment with new ideas and methods when they have time. When important new developments occur, you'll be ahead of the game.

— By Mitzi Waltz



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03. Research and Development
04. Graphic Arts
05. Communications: Publishing, Advertising, Public Relations, Promotion
06. Government: Federal
07. Government: Non-Federal
08. Manufacturing
09. Education
10. Finance: Banking, Accounting, Insurance, Real Estate
11. Health, Medical, Legal
12. Non-Computer Retailer, Wholesaler, Distributor
13. Agriculture, Mining, Construction, Oil, Transportation, Utilities

Computer Related
20. VAR/VAD
21. Retailer/Distributor
22. Systems House/Data Processing Service
23. Manufacturer (Computers, Software, Peripherals)
24. Computer Consultant
99. Other Businesses & Services (please specify) _____

2 Your Professional Title:

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D. Micro Manager/Specialist/Coordinator
E. Project Manager
F. Art Director/Graphic Designer/ Artist/Illustrator
G. Manager/Supervisor (not listed above)
H. Architect/Engineer
I. Systems Analyst/Programmer
J. Consultant/Advisor
K. Scientist
L. Educator
M. Editor/Writer
N. Professional (Doctor, Lawyer, etc.)
O. Accountant
P. Representative
Z. Other (please specify) _____

3 Your department/function at this location:

(Select one only.) Write Answer Here ➨ ☐

A. Engineering/Systems Engineering
B. Research & Development
C. Communications/Publishing/Public Relations
D. Art/Creative Design
E. MIS/DP/Information Systems
F. Manufacturing/Operations/Production
G. Sales/Marketing
H. Administration/Management/Personnel
I. Accounting/Finance
J. Education/Training
K. Science
L. Consulting
Z. Other (please specify) _____

4 Are there Macintoshes or other PCs listed below owned and/or planned for purchase within 1 year at this location?

☐ Yes ☐ No (Write in accurate quantity for all that apply)

		Currently Owned (Quantity)	Plan to Buy (0-12 Months) (Quantity)
Macintosh IIfx	1		
Macintosh IIcx/Macintosh IIx	2		
Macintosh IIci	3		
Macintosh II	4		
Macintosh SE/30	5		
Macintosh SE	6		
Macintosh Portable	7		
Macintosh Plus	8		
Macintosh (Other)	9		
IBM/Compatible Micro	10		
Workstation (e.g. Apollo, Sun)	11		

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5 If your firm's primary business at this location is retailing, reselling or consulting, how many Macintoshes are sold per year?

(Answer one only.)
A. Retailer: sold per year _____ (specify quantity)
B. Reseller: resold per year _____ (specify quantity)
C. Consultant: purchased by your clients through your firm's recommendations per year _____ (specify quantity)
☐ D. Not Applicable

6 Please check the Mainframe(s) or Minicomputer(s) at your location:

(Check all that apply.)
☐ 01. VAX ☐ 02. IBM ☐ 03. Other ☐ 09. None

7 Do you purchase, recommend, specify or approve any of the Macintosh/Compatible products listed below?

☐ Yes (If yes, please check all that apply): ☐ No

Computers
☐ 01. Macintoshes
☐ 02. Workstations
☐ 03. Minis, Mainframes

Connectivity
☐ 10. Local Area Networks
☐ 11. Modems
☐ 12. Micro/Mini/Mainframe Links
☐ 13. Communications Software

Peripheral Equipment
☐ 20. Laser Printers
☐ 21. Color Printers
☐ 22. Color Monitors
☐ 23. Hard Disks
☐ 24. Backup Systems
☐ 25. Plotter, Charting Devices
☐ 26. Scanners

Add-in Boards
☐ 40. Memory Boards
☐ 41. Graphic Boards
☐ 42. MS DOS Boards
☐ 43. Ethernet Boards

Software
☐ 50. CAD/CAM
☐ 51. Graphics
☐ 52. Desktop Publishing
☐ 53. Desktop Presentation
☐ 54. Database
☐ 55. Programming
☐ 56. Accounting, Payroll
☐ 57. Spreadsheets
☐ 58. Music
☐ 59. Project Management
☐ 60. Word Processing
☐ 61. Utilities

8 If you help purchase, specify, recommend or approve Macintosh Computers, software or peripherals, for how many MACs do you have this involvement over the course of one year?

(Select one only.) Write Answer Here ➨ ☐

01. 500+
02. 100-499
03. 50-99
04. 20-49
05. 10-19
06. 4-9
07. 1-3
09. None

9 Please indicate the communications capabilities that the Macintoshes at your location have:

(Check all that apply.)
☐ 01. Local Area Network
☐ 02. Communicate with corporate workstations, mini or mainframe computers
☐ 03. Communicate with remote mini or mainframe computers
☐ 04. Communicate via modem
☐ 05. Voice/Data
☐ 09. Other (please specify) _____

10 Indicate how many employees there are in your entire company:

(Select one only.) Write Answer Here ➨ ☐

01. 1000 or more 02. 100-999 03. Under 100

11 Indicate an additional individual at this location who might qualify for a FREE subscription to MacWEEK:

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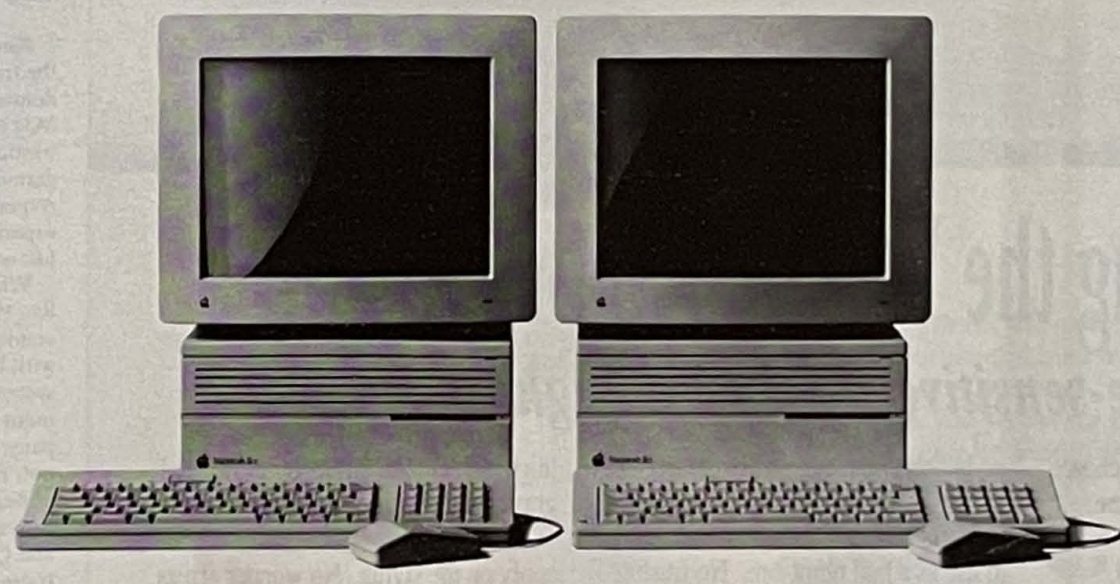

"Using a Mac®IIci is like being strapped into a rocket sled," raved *BYTE* magazine.

That's because the IIci (on the right) delivers significantly higher overall performance than our best-selling modular Macintosh®IIcx (on the left).

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Yet it costs only a bit more.

The IIci has built-in video support (so you don't have to buy a video card). And its high-performance design and long list of impressive capabilities provide all you need to grow in the future.

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Training

From Page 88

also offers on-site training and a "campus program," where students receive intensive instruction for a week.

Everett said the company has several types of personal computers available, a boon for graphic artists who work in multiplatform environments.

Cherry Chessom, who took Dotson's PageMaker campus program in June, is director of continuing education for Dade County Area Health Education Centers Inc. of Miami, a job that puts her in charge of creating brochures, newsletters and quarterly reports. "I came to get complete knowledge of PageMaker 4.0, and they accomplished that for me," she said. The class went to a Minneapolis service bureau to see the end of the printing process and worked hands-on for more than 45 hours.

Apple also has a network of authorized trainers, some of whom can handle advanced graphic arts training. U-Design Inc. is one such facility. "We specialize in graphics," said Maria McEvoy, director of training at U-Design. "One of our biggest classes is a color class, with color separation, scanning color documents and color printing," she said. U-Design, which is also a service bureau, offers four-person classes, as well as customized one-to-one training.

Into the classroom. A local university or community college may offer useful services, and at a lower cost than most training companies. Several universities, such as Pratt Institute, School of Visual Arts, Rochester Institute of Technology and Antelope Valley College have special career-refresher programs for design professionals.

Antelope Valley's computer graphics department offers a variety of hands-on courses on subjects such as electronic photography and presentation graphics. Co-sponsored by the National Art Education Association, the classes are aimed at educators but are useful for professionals as well, according to the college.

Colleges active in professional training aren't limited to the coasts. Kent State University's School of Art, for example, offers intensive summer sessions on creative design and Mac applications. The sessions are all hands-on, according to Professor Charles Walker, and range in subject from Macintosh

Beware of expensive detours. Because graphic arts training on the Mac is in its infancy, you could find youself wasting time and money in a "Mac kindergarten."

design basics to advanced practice with the latest software and hardware tools.

Jody Zamirowski, design coordinator at the College of DuPage in Chicago, took Kent State's QuarkXPress course last year. In addition to working with XPress, she said, "we had an overview of a number of programs — Illustrator, FreeHand, PageMaker, PixelPaint, SuperPaint." Students worked on everyday problems, such as importing documents and images from one program to another.

Keep your eyes open. As you search for the training you need, beware of expensive detours. Because graphic arts training on the Mac is in its infancy, you could find yourself wasting time and money in a "Mac kindergarten" taught by an inexperienced instructor. A qualified instructor should have professional experience and education in graphic arts, not just computer expertise or teaching ability.

When graphic designer Julie Benbow of San Francisco's Julie Benbow Design took a vendor-sponsored course on using the Mac with her typesetting service bureau's new system, she was disappointed. "The equipment is sophisticated at the typesetting company, and the equipment we trained on was not. Every monitor was different," she said.

Benbow's group spent three days running through Macintosh basics, Adobe Illustrator and QuarkXPress. "I found it extremely frustrating. It should have been more specifically tailored to how we were going to use it later," she said. Benbow still hasn't learned how to use the Mac, and her training experience left a sour taste. "Everyone kept saying, 'The things you can do with this system are absolutely amazing,' " she said. "It's true. The mess I made was absolutely amazing."

For classroom-based instruction, observing a trainer in action should not be a problem. If you are planning to bring a trainer on-site, ask the company for names of former clients that you can call as references.

There is one more area for caution. Many training companies not only train and consult but sell products as well. These may have "sweetheart deals" with manufacturers that could lead them to push unneeded products on their clients. □

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Training resources

These are but a few of the organizations and companies offering Mac training for graphic artists:

Aldus Corp.
411 First Ave. S., Seattle, Wash. 98104;
(206) 622-5500

American Center for Design
233 E. Ontario St., Suite 500, Chicago, Ill. 60611;
(312) 787-2018

American Institute of Graphic Arts
1059 Third Ave., New York, N.Y. 10021;
(212) 752-0813

Antelope Valley College
Fine Arts Division
Department of Computer Graphics
3041 W. Ave. K, Lancaster, Calif. 93536;
(805) 943-3241

AppleTree Technologies
3020 Mercer University Drive, Atlanta, Ga. 30341;
(404) 457-4500

Association for Development of Electronic Publishing Technique
360 N. Michigan, Suite 111, Chicago, Ill. 60601;
(312) 609-0577

Association of the Graphic Arts
5 Penn Plaza, 20th Floor, New York, N.Y. 10001;
(212) 279-2100

Center for Electronic Arts
329 Bryant St., Suite 3D, San Francisco, Calif. 94107; (415) 882-7063

The Dotson Institute
1107 Hazeltine Blvd., Suite 499, Chaska, Minn. 55318; (800) 325-8820

Electronic Directions Ltd.
23 E. Fourth St., New York, N.Y. 10003;
(212) 533-9651

Gestalt Systems Inc.
450 Spring Park Place, Suite 1200, Herndon, Va. 22070; (703) 471-6842

Goodsight Graphics Inc.
588 Broadway, Suite 807, New York, N.Y. 10012;
(212) 925-0400

Graphic Artists Guild of New York
11 W. 20th St., Eighth Floor, New York, N.Y. 10011; (212) 463-7759

Graphicsplus
3760 S. Robertson Blvd., Suite 202, Culver City, Calif. 90232; (213) 559-3732

Graphix Zone
7901 Garden Grove Blvd., Garden Grove, Calif. 92641; (714) 891-2829

Hawkey & Associates Inc.
350 W. Erie St., Chicago, Ill. 60610;
(312) 915-0695

Kent State University
School of Art, 211 New Art Building, Kent, Ohio 44242; (216) 672-7856

Letraset
40 Eisenhower Drive, Paramus, N.J. 07653;
(201) 845-6100

The Mac Resource People
Lakewood Commons, Pierson Building,
Suite 7, 1233 Shelburne Road,
South Burlington, Vt. 05406-4373; (802) 860-2877

MicroAge
626 W. Jackson Blvd., Suite 300, Chicago, Ill. 60606; (312) 715-3100

National Association of Desktop Publishers
Museum Wharf, 300 Congress St., Boston, Mass. 02210; (617) 426-2885

Pratt Institute
200 Willoughby Ave., Brooklyn, N.Y. 11205;
(718) 636-3600

Promotional Perspectives
1955 Pauline Blvd., Suite 100-A, Ann Arbor, Mich. 48103; (313) 994-0007

Quark Inc.
300 S. Jackson St., Suite 100, Denver, Colo. 80209;
(303) 934-2211

Rochester Institute of Technology
Technical and Education Center of the Graphic Arts, Frank E. Gannett Building, P.O. Box 9887, Rochester, N.Y. 14623-0887; (716) 475-2317

School of the Art Institute of Chicago
37 S. Wabash Ave., Chicago, Ill. 60603; (312) 899-5100

School of Visual Arts
209 E. 23rd St., New York, N.Y. 10010;
(212) 679-7350

SIS Inc.
Applied Technology Center for Printing and Publishing, 90 Canal St., Boston, Mass. 02114;
(617) 720-5500

TOTO Computer Graphics Inc.
20700 Watertown Road, Suite 208,
Waukesha, Wis. 53186;
(414) 785-0876

Typographers Association of the Greater New York Area
408 Eighth Ave., Suite 10A, New York, N.Y. 10001;
(212) 629-3232

U-Design Inc.
201 Ann St., Hartford, Conn. 06103;
(203) 278-3648

AMAZING STORIES.

Information Management

The HyperMedia Group, Emeryville, CA

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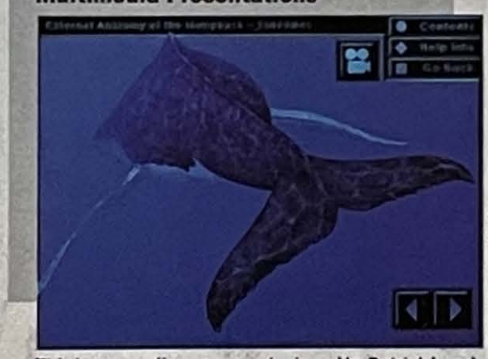

Patrick Lynch, Yale University

This hypermedia program, designed by Patrick Lynch of Yale University, uses sound, video, and full-color graphics in an interactive front end to a video disc.

Supercharge your communications with the power of multimedia presentations using SuperCard's support for full color graphics, multiple animation formats, color text, and support for video and sound. Get your audience's attention using multimedia in...

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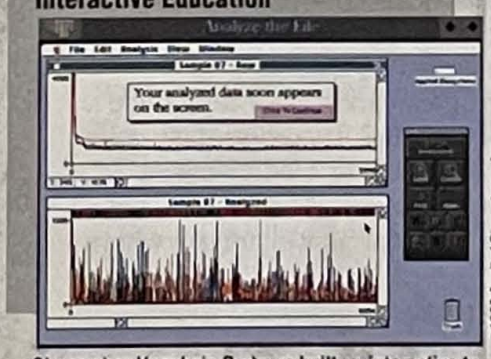

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Boldface EZRA SHAPIRO

Sadder, older and more computer-literate

About two years ago, I interviewed Tom Lulevitch for MacWEEK's GA section. Lulevitch, an established illustrator and designer based in New York, had recently purchased a Mac Plus and was starting to teach himself how to use it. I figured that because Lulevitch was both articulate and talented, his experiences would make an illuminating set of profiles. My plan was to follow this typical creative pro along the learning curve, culminating with a triumphant pictorial of the art Lulevitch had produced after a year with his Mac.

Unfortunately, Lulevitch turned out to be perhaps more typical of his profession than I was expecting. He found the Mac limited and frustrating, crude indeed compared with the traditional media for illustration. Quickly, the computer was relegated to a lowly clerical berth; Lulevitch decided to use it to prepare mailing lists and handle trivial record keeping. Thus ended my plan; there was to be no artwork.

But a few days ago, I received a surprising phone call. Lulevitch is now taking a course called "Desktop Design I" at the School of Visual Arts in New York and finally developing Mac skills. What produced his about-face? "Fear," says Lulevitch. "Illustration is becoming so competitive, and my role in it has changed so much, that I'm starting to look for design work again. I've noticed that at least 90 percent of the ads in the New York Times insist on Mac knowledge. Since all I'm trying to do is survive financially, I'm relying on the Mac to get my foot in the door."

He's not unique in this position. Out of 18 of [his classmates], he says, "three women are regular students at SVA, but the others are all between 30 and 45. We cross all lines; I'm an illustrator, there's a guy who had his own typesetting outfit, there's a cartographer, and the rest are general designers. We're there, including myself, because we're losing work to people who have computers."

Lulevitch is ambivalent, but his enthusiasm is growing. "The more knowledge I have, the more I'm left with an empty feeling that it's a monumental task. Wow! There's so much stuff I don't know! I've been spending hours — days — making mistakes, going nowhere. To get from where I am to where I'd like to be is going to take quite a while — a couple of years, according to my instructor. It's a long process, very frustrating, but kind of exciting at the same time. It's very time-consuming, it's very intensive, and it becomes addictive.

"The addictiveness is that you can keep changing a layout, printing it out, looking at it. To experiment like this, I would have to spend a small fortune on type. I couldn't even think about doing it as an individual; I couldn't afford it. All of a sudden, this computer lets me play, and for 10 bucks I can get my layout printed out on a Linotronic. It's amazing.

"The Macintosh has tremendous appeal for typography, for page layout, for those annoying mechanical things. For all the decisions you make when you're laying down type, it's a miracle. It opens your world up, makes things incredibly flexible. That's the part that's worth the effort."

Lulevitch still has trouble seeing the Macintosh as a necessary device for illustrators. "I don't like it as an illustration tool. Not at all. It's still a long, convoluted process to do something I can do a thousand times faster: to draw anything I want, in methods I know. To try to do it on a computer is just painfully slow."

Yet illustrators would do well to look at the Mac as a way of replacing the clip files of reference materials most professionals collect. "Feeding things into the computer and having those images to play with is fantastic. I see great potential, and that excites me. That's addictive, too. When I first learned to use a scanner, I wanted to scan everything I could imagine onto a floppy."

His conclusions? "The phenomenon is here, and this is something we have to do. I've been paying attention to magazine typography and layout, and the interesting stuff is a result of computerized art departments. I love it, but I find it's more difficult than I thought it was going to be. My hopes and my demands are shaky. I'm not taking this course for fun; I'm taking it to survive in the marketplace. And I realize that I still don't know anything, and that scares me." □

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Guest Viewpoint EDGAR GUTTZEIT

High-quality color work on the Mac *is* possible

As our first guest columnist in GA, Edgar Guttzeit, owner of New York-based Goodsight Graphics Inc., a training center, design shop and service bureau, is no stranger to color technology nor to resistance to it. As an engineer for Hell Graphic Systems Inc., he specialized in electronic scanner technologies and knew well those color separators who refused to accept digital separations. He worked on one of the first Scitex systems and co-founded ChromaSet in San Francisco, which used IBM PCs and compatibles, as well as "closed" design systems. Through it all, Guttzeit watched the emergence of desktop publishing. He noticed that nobody took claims about color seriously, certainly not the big electronic pre-press houses. Here, Guttzeit discusses the roadblocks still impeding the widespread use of Mac color technology. — The editors

Last summer I truly realized the importance of the Mac as a color platform. We saw the announcements of some of the best color software ever written: ColorStudio by Letraset, Adobe Photoshop and the release of Apple's 32-bit QuickDraw. Significant as well was the introduction of inexpensive but high-quality hardware, such as the Nikon LS-3500 desktop scanner and the Optronics ColorSetter, the first imagesetter not to evolve from a typesetting environment.

My system integration and training center is based on the Mac as a color platform, and, if I say so myself, we produce color that is not only "good enough" but excellent for advertisements, magazines and so on.

In past months, however, something has gone wrong. The market for 24-bit Mac color has not taken off; there are only a few thousand serious color users out there. The print industry is in a slump; business volume has dropped 2.5 percent instead of experiencing the anticipated growth of 5 percent to 10 percent. Lawsuits among vendors are widespread; trade shows disseminate confusion rather than technology; and many Mac consultants are avoiding color issues, stating that color can be produced only on big platforms, or pretending that color is as easy to learn as MacWrite.

Separators and vendors have announced links between the desktop and their proprietary systems. But they do so without ever proving the benefits they promise. Many hardware vendors now claim to be "system integrators" because they use off-the-shelf hardware and software, then make it proprietary again by adding some minor software and hardware "improvements."

What is the consumer to do? Frankly, an entire market is at stake because users may simply put buying plans on hold until the mid- to late '90s, when on-demand, fully automated color just may be available.

Is there an end to the confusion in sight? Hardly. Apple doesn't seem to have much interest in graphics or publishing anymore. IBM is a self-proclaimed graphics force. Workstation vendors are jamming the color market. What nobody's facing is that technology without a valid customer base is doomed.

My treatment for this ailing patient is reality recognition. High-quality color work on the Macintosh is not only possible but often surpasses other systems. Let us cease using labels such as "good enough" color. What about the operator who creates "excellent" color on the very same "good enough" platform?

Stop quarreling over the prices of color software. Does the software do the job or not? As long as the press labels a superb color package such as ColorStudio too expensive, professionals may not know the power they are missing. You could produce more profit on the first production job in a professional environment than the software and hardware costs together.

I find it painful to see that, for the first time, the hurdle is not technology but lack of knowledge and greed-driven misinformation. We need to generate more color usage throughout the industry in order to keep our businesses. We must demonstrate and prove the benefits of the "new color media" and responsibly educate the market in its proper use. High-quality color on the Mac is a reality. Everybody stands to gain by using the Mac: designers, service bureaus, separators, printers and publishers alike. Let's not sink the ship by quarreling over nonsensical issues. □

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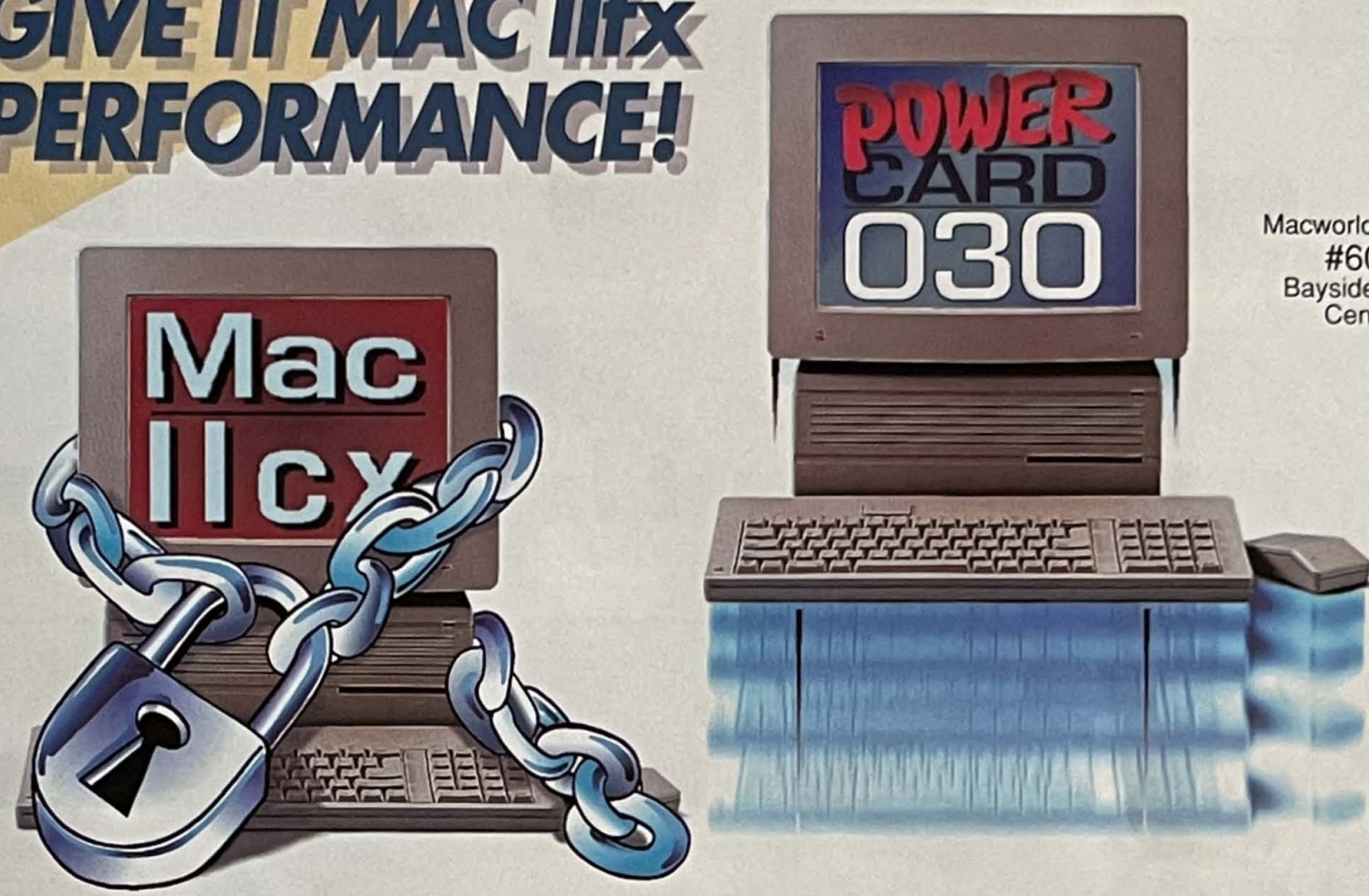

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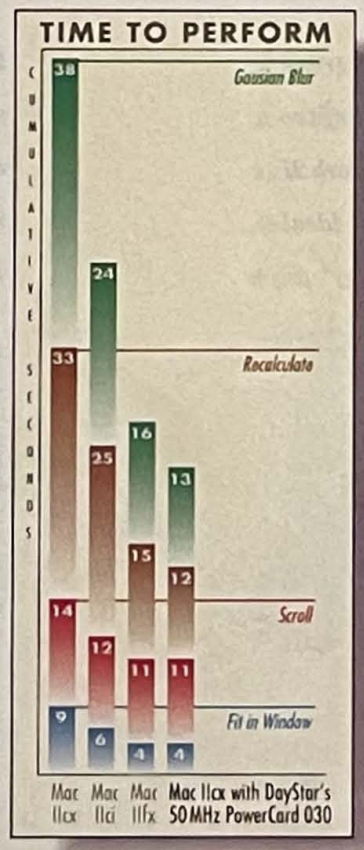

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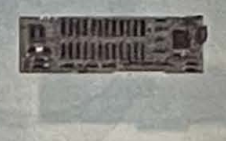

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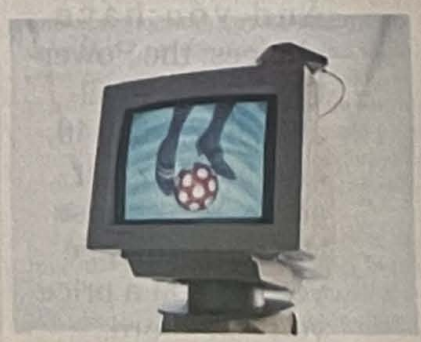

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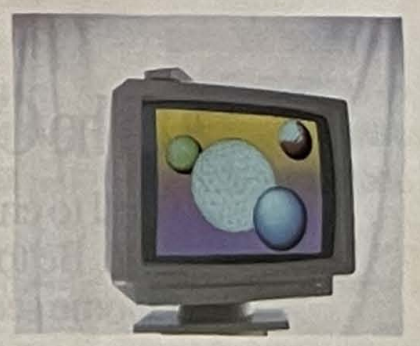

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TRENDS

Presentations hit the executive desktop

Color templates pave the way

By Larry Stevens

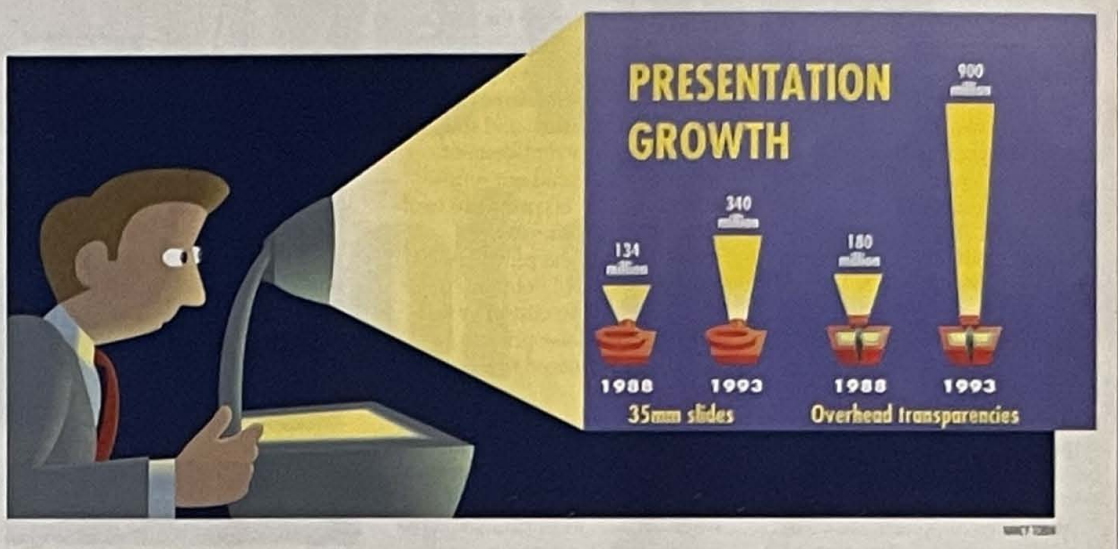
Desktop presentation software is raising the quality of presentations and giving managers a hand with designing.

Typewritten transparencies, once the meat and potatoes of presentations, are increasingly considered less than professional. Borders, bullets and a variety of fonts are becoming de rigueur. Color transparencies and slides, once the leading edge, are now commonplace.

For more on film recorders – Go to Page 81

At the same time, design specialists may be going the way of the long-distance operator: less relevant as more users learn to "dial direct" by creating their own presentations on the Mac.

Black-and-white transparencies. At Chicago-based defense contractor FMC Corp., everyone from executives on down creates his or her own transparencies (although some enlist the help of a secretary). Because the company has 110 locations, it is impossible to post a design department at each site. So until recently, many presentations at FMC were plain vanilla, hammered out on office typewriters.



But Christine Leatz, FMC's manager of office technology worldwide, didn't think her company should represent itself with less than high-quality presentations. She had the few designers at the company create templates using Aldus Persuasion. Even design-inept and computer-unsophisticated employees could then paste key phrases from the text of their speeches into the templates, and the fonts, bullets and borders would automatically fall into place.

"The idea was to spread around the few designers that we have as far as possible," Leatz said. "They can't be everywhere, but their templates can."

For many users, such as the executives at FMC, ease and speed are the key advantages of desktop presentation software. However, other types of software are sometimes used when making it easy is not as important as making it impressive. For example, because Informix Software Inc.'s Wingz is a spreadsheet, it is harder to master than desktop presentation software. But if you learn how to create tables in Wingz, the program can generate full-color 3-D charts. Similarly, while drawing programs like Claris Corp.'s MacDraw II have more graphics tools than desktop presentation software and can often create more-interesting images, non-

See Presentations, Page 102

TRENDS

Thrifty managers go mail order

Up to 60% savings vs. distant service

By Amy Bermar

Why purchase a Macintosh hard disk at retail when you can get two for the same price from a mail-order supplier?

That's the bottom-dollar reasoning that causes thousands of Mac managers to forgo brand-name labels and buy hard drives and other peripherals from mail-order companies nationwide. In exchange for shopping around and researching the products, these managers relish the chance to save hundreds of dollars. Mail-order prices range from 40 percent to 60 percent of retail prices, according to International Data Corp., a market research firm based in Framingham, Mass.

"Why not bypass the dealer and go direct?" asked Dave Roberts, a systems analyst at Health Care Communications, a Bellevue, Wash.-based Apple value-added reseller that has bought several hundred drives from mail-order merchandisers since 1987.

Roberts just bought another 50 Quantum drives this spring. "They're reliable and they work," he said. "And the mail-order house backs it up."

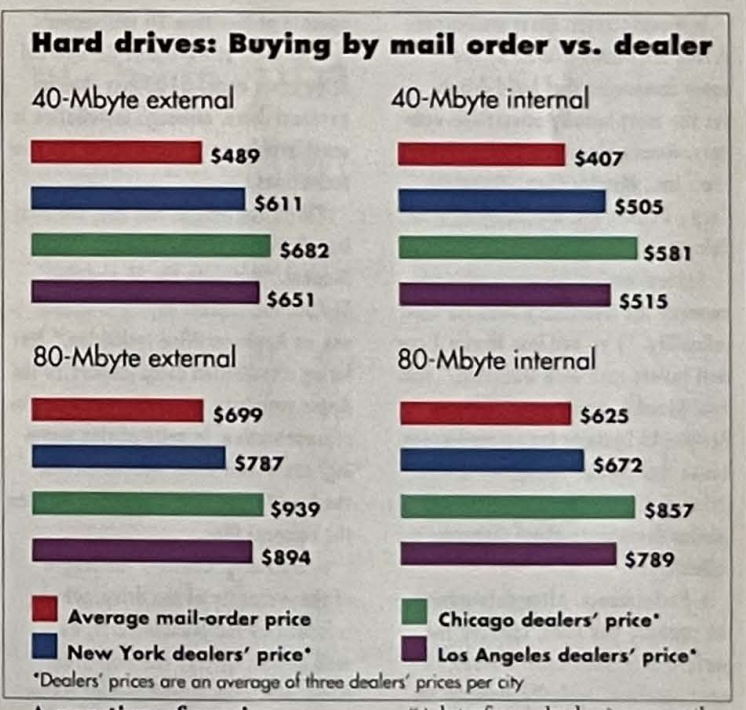
Small companies, schools and individuals buying just a few drives at a time are the biggest customers of mail-order houses. Resellers who have run out of stock also have been known to dial the toll-free numbers that many mail-order firms provide. Large corporations, on the other hand, are more likely to buy hundreds of drives at a time directly from the manufacturer, through purchasing agreements that deliver substantial discounts.

Prices of drives through the mail-order channel are unequalled elsewhere. A 40-Mbyte internal drive produced by Rodime Systems Inc. but bearing an Apple label retails for $1,299, with a street price of $975. A similar drive made by Quantum Corp. and packaged by mail-order companies can cost as little as $339 through mail order.

"The Mac mail-order business is really picking up at the low end of the market, particularly the 10- to 40-Mbyte external drives," said Crawford Del Prete, an industry analyst with International Data.

Large capacity drives — ranging from 170 Mbytes to 660 Mbytes — also are offered through mail order. Most mail-order drive sales parallel the drive business as a whole: 40- and 80-Mbyte drives provide the bulk of mail-order business, according to mail-order executives.

"There are an awful lot of first-time users and institutions buying 40-Mbyte drives to replace the 20-Mbyte drives shipped with the SE/30," said Paul Mandel, president of Alliance Peripheral Systems Inc., a mail-order house based in Independence, Mo., that specializes in drives for the Mac market.



A question of service. Many potential mail-order customers worry that service will be haphazard and that products will be of uncertain quality. Others, mail-order executives say, need the kind of guidance that a qualified retail sales representative can provide.

"A lot of people don't use mail order because they want to go to a dealer and have someone explain exactly what they need," conceded Bill Bayer, president of Jasmine Technologies Inc., the mail-order drive company that in March filed for protection from creditors

See Storage, next page

Storage

From previous page

under Chapter 11 of the Federal Bankruptcy Act.

Although Jasmine is still in business, some 600 customers are still awaiting the return of drives sent to the company's San Francisco headquarters for repair. (Industry observers agree that the company's troubles stemmed primarily from rapid growth, not its role as a mail-order purveyor.

Still, low prices alone can't always compensate for the inconvenience of dealing with a distant supplier. The David Sarnoff Research Center, an electronics R&D lab in Princeton, N.J., purchased drives by mail order in the past but felt burned when the overall failure rate began to increase. A purchasing agent there said even small problems often require drives to be returned, because the issue can't be resolved over the phone.

Mail-order suppliers argue that they often provide extensive technical support and frequently troubleshoot problems not introduced by the drives.

"With more than 90 percent of the drives sent back to us, we can't find anything wrong," said Mandel. "Sometimes the power cable wasn't plugged in, or the SCSI cable wasn't connected or the terminator wasn't installed. Sometimes, depending on how many devices are attached to the machine, you may need additional terminations.

"Our first question when we're doing support is, 'Is it turned on?' " said Mandel, noting that customers are frequently surprised to learn the drive has an on-off switch.

When mail-order drives go bad. When a drive must be returned for repair, most mail-order houses require the user to pay for shipping but assume the cost of sending out a replacement. Some companies guarantee second-day delivery, and some also issue a new replacement, although most send out refurbished models, according to mail-order company executives. Many will ship the replacement while the original defective drive is en route, if the customer will allow the purchase price to be temporarily charged to a credit-card account.

It cuts both ways. Mail-order companies recognize that cultivating a reputation for reliability is essential, and most promise rapid turnaround. Low margins make dependability necessary for the seller as well because a high repair rate can quickly erode any profits, said Mike McNeil, an owner of ClubMac, a mail-order company in Irvine, Calif.

In the end, executives such as McNeil count on bargain-savvy shoppers to assume the added responsibility that comes with buying by mail. Many customers first research products through the retail channel, recoil at the prices and decide to try buying by mail. □

When buying storage by mail, consider:

▶ **Manufacturer.** Most mail-order drives are manufactured by the same companies that build drives for the most heavily advertised vendors. Among these are Conner Peripherals Inc., Maxtor Corp., Quantum Corp., Rodime Inc. and Seagate Technology Inc.

Several mail-order companies recommend the Quantum drives for their reliability. "I've had less than a 1 percent failure rate with Quantum," said Paul Mandel, president of Alliance Peripheral Systems Inc., a mail-order house that carries Macintosh drives. Other mail-order vendors voiced similar sentiments about Quantum's reliability.

▶ **Performance.** After determining the capacity you need, consider the performance. Mail-order houses, like most resellers, typically promote the fastest recorded throughput identified by the manufacturer. In reality, however, a drive with 12-millisecond access time is more likely to operate at closer to 19 milliseconds in a realistic business environment, mail-order vendors agreed. Virtually all the current models operate at less than 20 milliseconds.

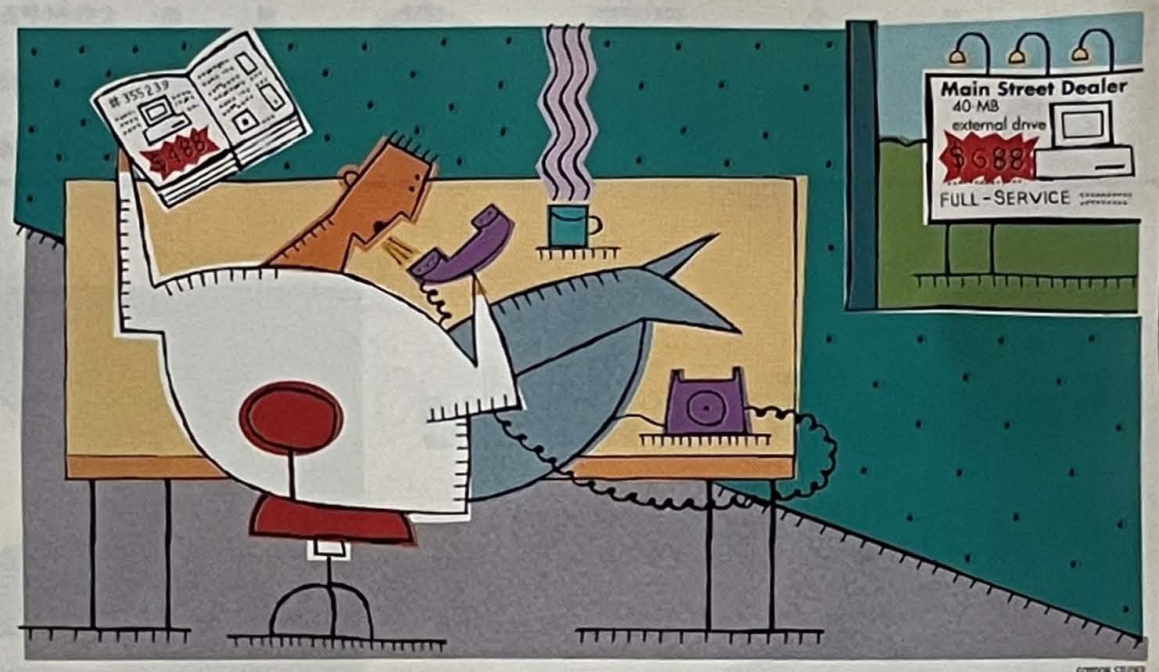
▶ **Internal or external?** An internal drive costs about $100 less than an external drive, although installation is considerably more complicated for nontechnicians.

"With the Mac II, IIci, IIcx and IIfx, installation is relatively easy," said Mandel. "But with the SE and the SE/30, the manual says you should use an Apple certified technician." Not hiring a technician could jeopardize the Apple warranty, according to an Apple representative. In spite of this warning, some mail-order houses include the long torque wrench needed to open the compact Mac.

▶ **Warranty.** Consider the length of the warranty of the drive, which is issued by the manufacturer, as well as how quickly the mail-order house will issue a replacement if the drive fails.

▶ **Price.** Negotiate a discount. Experienced buyers often ask for discounts when buying at least six drives at a time — and sometimes they even get them. So don't be afraid to ask.

— By Amy Bermar



GORDON STUDER

MacInTouch

RIC FORD AND RICK LEPAGE

Mounting disk cartridges and debugging PostScript

BUGS & TIPS

Mount 'em cowboy. The strange phrase "to mount a disk" came originally from environments where an operator in a special computer room would take a disk (a stack of platters) out of its protective enclosure and physically place it on a spindle in a drive that looked like a washing machine.

In the modern Mac environment, with its sealed Winchester disks, "mounting" has come to mean something slightly different. It is the process of making a "volume" of Mac files available on the Finder's desktop.

Normally, a hard disk mounts automatically at start-up time, and that's that. There are a few extra wrinkles, though, with magnetic and optical cartridge drives.

The Mac operating system needs a separate "driver" to talk to each device. Typically, the driver is loaded automatically from any hard disk that is connected at start-up time. In the case of cartridge drives, however, the cartridge may not be in place at start-up, so no driver is loaded.

To get around this problem, vendors usually provide a separate driver file that goes in the System folder of the start-up disk for automatic loading.

Some utility programs offer an alternative to putting drivers in your System folder. The Control Panel device SCSI Probe (see MacWEEK, June 6, 1989) allows you to manually mount all off-line volumes by clicking on a button. The mounting process loads drivers from disks or cartridges if necessary and also remounts volumes that have been dragged off the desktop into the Trash. Bill Steinberg's MountEm is an Fkey that performs the same functions.

KEVIN BERGER

One potential problem with cartridge drives is confusion among drivers: If you start up with a cartridge in place from vendor X and eject it to insert a cartridge from vendor Y, the Mac isn't smart enough to switch drivers. The operating system will use X's driver for everything in that drive, including Y's cartridges, until you restart the computer. This can wreak havoc, so use only one vendor's cartridges per session.

SCSI Probe and MountEm are available in the Zmac download library (Section 3, file names MOUNTE.SIT and SCSIPR.SIT).

Redebugging. Not long after we wrote about Systems of Merritt Inc.'s Advanced PostScript Error Handler (see MacWEEK, June 12), we got a copy of another PostScript debugger, PinPoint from the Cheshire Group. PinPoint's $49.95 price is much less than the $295 charged by Systems of Merritt.

Both products operate similarly. By downloading the program to a PostScript printer, any job that fails to print will generate a report listing the error type and interpreter's status when the error occurred.

There are some differences that make the price gap understandable. The Advanced PostScript Error Handler is a technical tool for PostScript programmers. It has more-thorough documentation and prints more-detailed reports.

PinPoint is most useful as a support and troubleshooting tool for users who have documents that will not print because of a PostScript error. It can be used to fix simple errors or to provide application vendors with information about the cause of a print failure.

Version 1.1 of PinPoint contains one feature not found in the Advanced PostScript Error Handler: virus control. Reports have circulated of a PostScript program containing a Trojan horse that changes the internal password found in the EEROMs (electrically erasable ROMs) of a PostScript device (see MacWEEK, July 31). Without the right password, the printer will not operate properly, and the only solution is to replace the chips. PinPoint's protection feature prohibits any changes to the password.

REFERENCE

Cheshire Group, 601 Van Ness Ave., Suite E3259, San Francisco, Calif. 94102; (707) 887-7510.

We welcome comments at MacWEEK, 4 Cambridge Center, Third Floor, Cambridge, Mass. 02142; (617) 497-2600; (617) 497-2646 (fax). Electronic Mail: CompuServe (Ric Ford) 72511,44, (Rick LePage) 76117,1765, GEnie, America Online, Delphi, MCI Mail, PAN: MACWEEKBOS; Connect: RICFORD, RICKLEPAGE, AppleLink ("Attn: MacInTouch" in Subject): MACWEEK; Internet: 72511.44@COMPUSERVE.COM.

Join us in the MacWEEK Forum by typing GO ZMC:MACWEEK on CompuServe or Zmac. Shareware files are available for downloading from the Zmac Download Library (GO ZMC:DOWNLOAD).

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Presentations

From Page 99

artists sometimes have a harder time with them. Says the marketing manager of a San Francisco-based fruit and vegetable canning company: "If I have 15 minutes, I know I can make a very nice set of transparencies with CA-Cricket Presents... (from Computer Associates International Inc.). But if I have a day or so, I might use MacDraw and make a really great set."

While FMC had been able to get away with typewritten transparencies for years, other companies don't dare craft low-rent media. For example, the costs are extremely high when the Ground Command and Control Systems division of Fullerton, Calif.-based Hughes Aircraft Co. creates presentations. The content is very complex and must, because of the nature of the business, be exquisitely produced.

Typically, before Hughes wins a contract, it must present to its prospective customer hundreds of transparencies over the course of weeks. In the past, these transparencies were professionally produced by design houses for $25 to $100 each.

To cite one budget-busting example, when Hughes was bidding on NASA's Advanced Automation System Program, it had to present more than 500 transparencies and slides produced at an estimated price of more than $20,000. (Despite the cost, Hughes lost the contract to IBM Corp.)

When engineers at Hughes began to shift to Macs, Felicia Campbell, publications specialist at the Ground Command and Control Systems division, hatched the idea of letting the engineers make the presentation frames as well. "It's not really that big a step for them," Campbell said. "Engineers are familiar with design. If they can draw complicated charts and diagrams, they have no problem pasting those images along with text into Microsoft PowerPoint." As a result, the cost of presentations dropped by at least 60 percent.

Color: Easy, but users wary. While employees at many companies are now willing and able to crank out black-and-white transparencies with desktop presentation software, fewer users have the courage to try their luck with color. The step from typewritten to computer-generated black-and-white transparencies seems to be more easily taken than the step to producing color transparencies or slides, which have traditionally been done by designers.

However, according to Arnold Zunick, director of audio-visual/video production at Polaroid Corp. in Cambridge, Mass., with presentation software, color transparencies and slides are as easy to create

Transparencies vs. slides

Many presenters think color transparencies are more effective then color slides.

Joe Cillo, president of Presentation Arts in San Rafael, Calif., who creates color transparencies using a QD5504 color thermal-transfer printer from Seiko Instruments USA, recommends transparencies to his clients.

"Transparencies are more interactive," he said. "The lights are on; people can take notes, you can make eye contact. When people look at slides, they think they're watching a movie. They're more likely to relax and daydream."

For more on color printers — Go to Page 75

But the cost of color thermal-transfer printers, though moving down, still discourages many businesses, other than design houses, from buying them.

Robert Lucas, project manager of Applied Computer Services in Simi Valley, Calif., a 45-person software house that sells turnkey computer systems to credit unions, sends his frames to a service bureau when he needs color transparencies. (He creates his own black-and-white transparencies using his company's LaserWriter.) According to Lucas, although he creates about 200 to 300 color transparencies a year, at $5, it would take him too long to make up the cost of a color thermal-transfer printer. Still, he said he misses the immediacy he can get by printing his own transparencies.

"It's a trade-off," Lucas said. "Black-and-white transparencies don't hold the audience's attention quite as well as color, and they can't be seen as well in large rooms. But if I have to send out for color and wait a few days for the transparencies to come back, I can't make last-minute changes. A color printer would help, but the cost is too high for us to justify."

— By Larry Stevens

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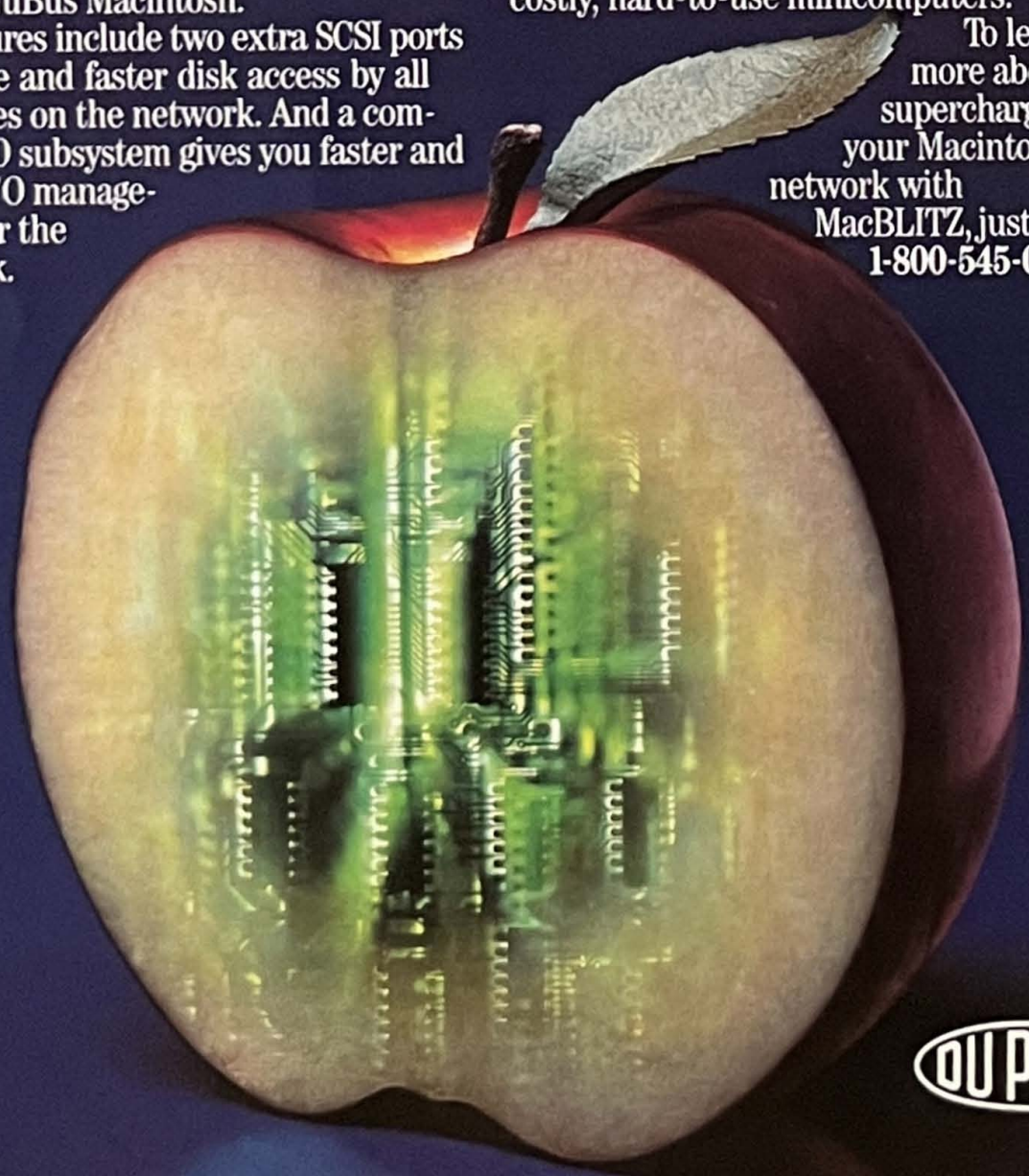

DUPONT

as black-and-white ones. All presentation packages come with color templates into which you can paste text as easily as you can black-and-white templates. And printing color transparencies on color thermal-transfer printers and color inkjet printers is as simple as printing on a laser printer. If your company has no color printers, you can send your file to a service bureau that produces color transparencies or slides.

Zunick is optimistic about the future of color presentations at Polaroid. "The more people see how easy it is to make [color] slides, the more they will be willing to try it," he said. "Some people will need help choosing the best templates for a particular job or deciding how best to order the slides, but the actual hands-on work should eventually end up back with the users."

Desktop presentation software has elevated the quality of presentations to new levels. Companies that were proficient in making transparencies with their typewriters are now making better and more-colorful ones with their Macs. Slides and animations are also making more-frequent appearances.

"Our surveys show computer-generated 35mm business slides will increase from 134 million in 1988 to nearly 340 million in 1993," said William Cogshall, president of Desktop Presentations Inc., a market research firm in Mountain View, Calif. "Overhead transparencies will show an even stronger growth, jumping from about 180 million frames in 1988 to nearly 900 million frames in 1993."

At the same time, everyone seems to be getting into the act. As FMC's Leatz said: "Masking the presentation frames used to be a very hard part of giving a speech. Now we barely have to think about it." □

Product Info

ALDUS CORP.
Aldus Persuasion 2.0: $495
411 First Ave. S., Seattle, Wash. 98104;
(206) 628-2320

CLARIS CORP.
MacDraw II: $399
5201 Patrick Henry Drive, Santa Clara, Calif. 95052, (408) 727-8227

COMPUTER ASSOCIATES INTERNATIONAL INC.
CA-Cricket Presents... 2.01: $495
1240 McKay Drive
San Jose, Calif. 95131;
(800) 531-5236

INFORMIX SOFTWARE INC.
Wingz 1.1: $399
4100 Bohannon Drive, Menlo Park, Calif. 94025;
(913) 599-7100

MICROSOFT CORP.
PowerPoint 2.01: $395
1 Microsoft Way, Redmond, Wash. 98052-6399;
(206) 882-8080;
(800) 426-9400

SEIKO INSTRUMENTS USA
QD5504: $5,995
1130 Ringwood Court, San Jose, Calif. 95131;
(408) 922-5800

SYMANTEC CORP.
MORE 3.0: $395
10201 Torre Ave., Cupertino, Calif. 95014;
(408) 253-9600

MacWEEK desktop-presentation reviews

- Aldus Persuasion 2.0 with beefed-up outliner, better Autotemplate handling and the capability to import presentations from PowerPoint is the best all-round Mac presentation package. (See MacWEEK Reviews, Feb. 13.)
- CA-Cricket Presents... 1.0 has a quite complete feature set with full transition effects and, when it shipped two years ago, the largest variety of printer drivers. (See MacWEEK Reviews, Aug. 9, 1988.)
- Microsoft PowerPoint 2.0 is a finely crafted product with good color handling and an array of predesigned shaded backgrounds. It has not been upgraded in two years. (See MacWEEK Reviews, Aug. 9, 1988.)
- MORE 3.0 is the granddaddy of presentation packages and the most recently upgraded. This new version is rich with graphics features and has an improved user interface. (See MacWEEK Reviews, this issue.)

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Agfa Matrix Procolor	•	•	
Agfa Matrix Slidewriter	•	•	
Agfa Matrix PCR	•	•	
Agfa Matrix QCR-Z	•	•	
Agfa Matrix Forté	•	•	
Lasergraphics LFR	•	•	•
Mirus Film Printer	•	•	•
MGI Solitaire	•	•	
Presentation Technologies Montage FR1	•	•	•
Color Printers Supported			
Agfa Matrix TT200	•	•	•
Calcomp Colormaster	•	•	•
Calcomp Colorview	•	•	•
Calcomp Plotmaster	•	•	•
HP Paintjet	•	•	•
Mitsubishi G370	•	•	•
Mitsubishi G650	•	•	•
Tektronix 4693D	•	•	•
Tektronix 4693DX	•	•	•

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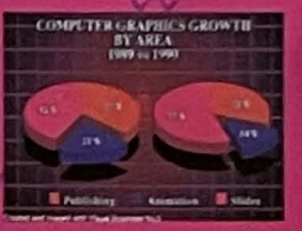
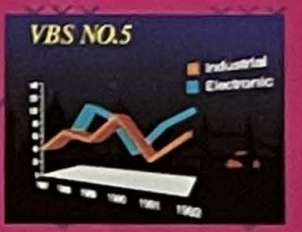
Chair.eps
A Postscript file. Created in Aldus Freehand.

Motor#5.ps
A Postscript file. Created in Aldus Freehand and VB No. 5 combining art, a 3-D chart, and text.

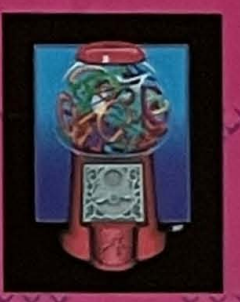
Computer Graphics Growth
A PICT file. Created in VB No. 5.



Line Chart
A PICT file. Created in VB No. 5.



Font Machine
An EPS file. Created in Adobe Illustrator.



Golfer.ps
A Postscript file. Created in Adobe Illustrator 88.

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REVIEWS

A/UX 2.0: A Mac Unix that is smooth, superb

A/UX 2.0

Apple
List price: $800

+ Integrates Unix and Mac operating systems with a high degree of compatibility; provides graphical interfaces to hundreds of Unix commands and utilities; conforms to accepted Unix standards including Berkeley fast file system.

− Some compatibility problems remain; has a history of poor support from Apple; Macs are expensive compared with other Unix platforms.

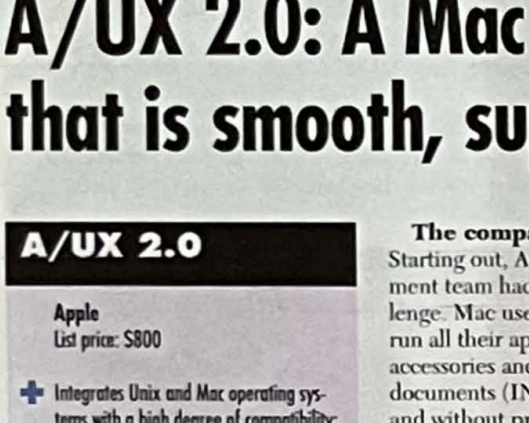
By Dan Mogorian

Apple's Unix has come a long way. What started life as a quick-and-dirty "checklist" port of Unix for the federal market has persevered into something pretty nice: an easy-to-use graphical environment that can gently introduce Mac users to Unix, yet is full-featured enough for advanced Unix people. The Mac environment has been integrated almost seamlessly, so you can simultaneously run multiple Mac applications under MultiFinder while doing multi-user activities on the Unix side. It's been a slow evolution, but with Version 2.0, A/UX finally is starting to look good.

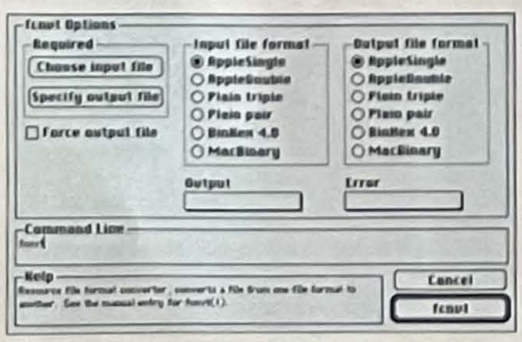
The compatibility trap. Starting out, Apple's A/UX development team had a tremendous challenge. Mac users expected A/UX to run all their applications, desk accessories and even their Startup documents (INITs) transparently and without problems; Unix people expected A/UX to have the latest and most-advanced system and networking software. It's hard to imagine two more-different environments to integrate.

The Mac operating system is single-user with no memory protection and two unusual file systems: the hierarchical file system (HFS) and the original Macintosh file system (MFS). Any Unix is multi-user with protected virtual memory, and the A/UX flavor has three file systems: the Berkeley default, the older System V and NFS (Network File System). The desired goal was a system in which a novice user could double-click on applications and drag files around without knowing any of the underlying mechanics.

Of course, it couldn't be that perfect, and it isn't. Many Mac programs "know too much" to work in the 32-bit-clean A/UX 2.0 environment, and A/UX can't support the patches that the Mac operating system uses to keep these programs working. But most up-to-date applications and DAs work completely, and so do a surprising number of INITs. Users expect complete compatibility, however, and the process of discovering which of your favorite system extensions don't work — such as Adobe Type Manager, Suitcase II and Capture — can be painful.



The A/UX 2.0 environment includes CommandShell (upper left) for issuing textual Unix commands as well as the more friendly Finder.

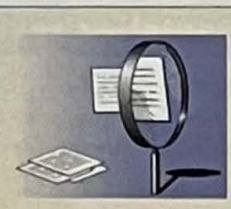


Commando puts a graphical interface on top of the often-confusing Unix command line, in this case for the translation utility fcnvt. New Commando interfaces can be created by clever users.

The best of Unix ... So, why would anyone with a Mac want A/UX? Well, Unix is popular at universities, on engineering workstations and, lately, in the business world, for some very good reasons.

▶ It supports multiple users and is multitasking, designed from the ground up with a protected "virtual

See A/UX, Page 106



Reviews in Brief: MAPLE • TECH INFO • MOOSE

Maple 4.2.1

Like its chief competitor, Mathematica, Maple from Brooks/Cole Publishing Co. is a symbolic mathematics computation program for the Macintosh and other platforms, including Unix workstations.

Maple, devised by a group at the University of Waterloo in Ontario, has grown far beyond the needs of its initial student market. It can handle fractions; polynomial factoring; and the exact solution to equations through calculus (including limits, derivatives, indefinite and definite integrals, differential equations and various power series), matrix algebra and other more advanced techniques. The program also can be used for numerical calculations, and the results of its calculations can be graphed.

Maple works both as a real-time calculator of formulas and numbers and as a programmable environment. At the Maple • prompt (changed from > in previous releases), you can evaluate an expression simply by typing it in and hitting the Enter key. Maple 4.2.1 also includes a secondary prompt (>>), used when a partial expression or statement has been entered and Maple is waiting for its completion. This secondary prompt structure will help novices remember to type in the semicolon that must terminate every Maple statement.

The Maple programming language is built upon the basic expressions used in the real-time mode and a simple assignment statement for putting values into variables. The language also includes While loops, comments, For loops, If/Then conditionals, simple procedures, local and global variables, and other basics. If you've programmed with HyperTalk, Pascal or Fortran, Maple will be fairly easy to learn.

Like Mathematica, Maple includes hundreds of predefined functions and symbols. This streamlines the process of building complex expressions, once you've learned the symbols.

The program comes with three decent, if not spectacular, manuals. Other improvements in Version 4.2.1 include pop-up help, improved variable resetting, automatic statement and procedure formatting, the ability to save Maple sessions, and the ability to save customized session settings.

Maple 4.2.1 represents the kind of added value we wish every software vendor would supply. For a nominal $30 upgrade fee, the $395 program has been significantly enhanced.

Brooks/Cole Publishing Co. is located at 511 Forest Lodge Road, Pacific Grove, Calif. 93950; (408) 373-0728. — *By Don Crabb*

Technical Information Source CD

Apple recently introduced the Technical Information Source, the first CD-ROM for Mac systems support personnel. While far-ranging, the collection is

See Reviews in Brief, Page 114

MacRenderMan gives modeling new dimension

MacRenderMan

Pixar
List price: $795

+ Uses high-quality standard RenderMan format adopted by other developers; renderer runs in background under MultiFinder.

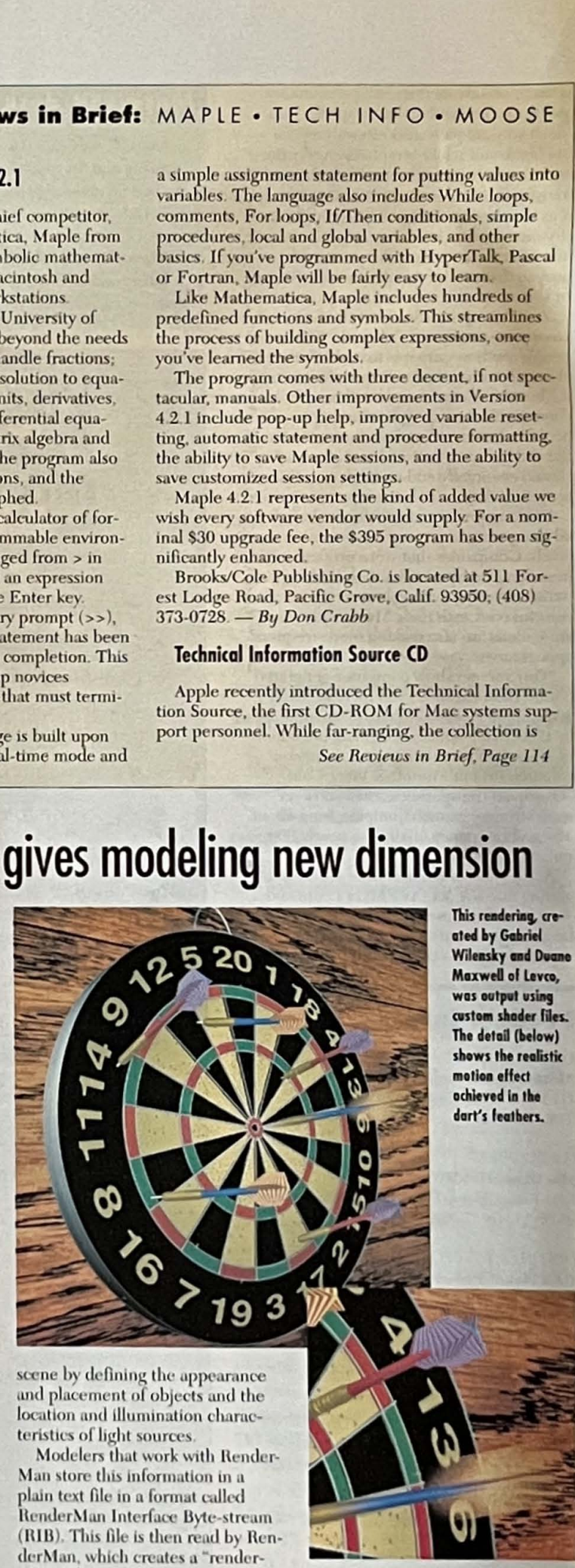
− Lacks features for advanced RenderMan programming; modelers yielding RIB files not yet available; limited shaders currently available; rendering is processor-intensive.

By Michael Murie

Pixar's MacRenderMan has been a widely anticipated product since the first tantalizing glimpses appeared at Macworld Expo a couple of years ago. The colorful and smoothly shaded animations of bicycles and lamps whetted appetites for Macintosh multimedia tools.

While Pixar has finally delivered MacRenderMan, third-party modelers that create the input files RenderMan uses have yet to appear. A slew are expected shortly (see sidebar, Page 110).

Who is MacRenderMan? MacRenderMan is a Mac implementation of Pixar's RenderMan renderer. A renderer creates photo-realistic images of a 2-D or 3-D scene from geometric information created by a modeler. The modeling program creates the scene by defining the appearance and placement of objects and the location and illumination characteristics of light sources.



This rendering, created by Gabriel Wilensky and Duane Maxwell of Levco, was output using custom shader files. The detail (below) shows the realistic motion effect achieved in the dart's feathers.

Modelers that work with RenderMan store this information in a plain text file in a format called RenderMan Interface Byte-stream (RIB). This file is then read by RenderMan, which creates a "rendering" of the scene.

In the process of rendering, MacRenderMan also makes use of special "shaders." Shaders are the routines that calculate the appearance of surfaces within the scene. In RenderMan, the user can write and compile shaders that are called from within the RIB file.

While Pixar's name is strongly associated with animations, MacRenderMan itself doesn't create them. Modelers and animators can create a series of RIB files to be imaged with RenderMan, and the images then can be strung together in an animated sequence. RenderMan is simply a high-

See RenderMan, Page 110

SCOTT WATSON'S

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Originally called MacTerminal, White Knight was the first communications program for the Macintosh. It was released as a version of a shareware program called Red Ryder.

DAVID DICKERSON
TECHNO-FILE

For many users, White Knight is the only communications program they will ever need.

ACTIVE WINDOW

White Knight is probably the most communications program on the market, containing technical features that rival those of mainframe and minicomputer software. It includes a powerful VT100 emulator, a Tektronix 4014 emulator, Xmodem, Ymodem, Ymodem-G, Kermit, and CompuServe B+ protocols, and a host mode for unattended operation. It includes a powerful script language for automating repetitive tasks.

JACK LEGRAS, UNITED PRESS INT'L

White Knight is one of the best values in communications software. It is powerful, flexible, and easy to use. It is the only communications program you will ever need.

MACWORLD

k10

Since May 1998 AMD has made no secret of the fact that its next-generation x86 processor, the k10, will be a quad-core design. Now it has revealed more details of the chip's architecture.

The k10 will be built on a 65nm process and will feature four cores, each with its own 512kB L2 cache. The four cores will share a 2MB L3 cache. The chip will also have a new memory controller that supports DDR2 and DDR3 memory, and a new HyperTransport 3.0 interface.

AMD says the k10 will be available in the second half of 2007.

Putting a 10 Gb/s wire in the Bicycle

Bicycle Research, a company based in Fort Collins, Colorado, has developed a 10 Gb/s wireless link that can be used to connect a computer to a peripheral. The company says the link can be used to connect a computer to a peripheral at a distance of up to 10 metres.

The link uses a 60 GHz carrier frequency and a 10 Gb/s data rate. It is based on a proprietary modulation scheme that Bicycle Research says is more robust than existing schemes.

The company says the link can be used to connect a computer to a peripheral at a distance of up to 10 metres.

Pure processing power

Shedding the financial weight

By k10: 2.0 updates

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Our new StarController has reliability written all over it.

Starting the world's first 5 1/4" Winchester disk drive back in 1980 was a big step for Seagate. Now we've taken another big step with the StarController. Our new intelligent disk controller.

Each drive has its own activity light. So you can tell at a glance if all the drives in your system are functioning properly.

A Run/Test switch on the back of the StarController lets you run a diagnostic test of the entire system. Plus you get built-in diagnostics at power-up.

The StarController has a Write Protect switch for each drive. So you can protect valuable data from accidental erasure. Plus you can set the Drive Select and Step Rate switches to match your drive's specifications.

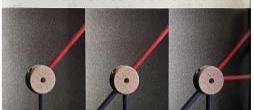
Each drive has its own power supply. So the StarController doesn't overload your system's power supply. Which means you can add more drives without having to buy a bigger power supply. It's not surprising that Seagate's reliability has become the standard by which all other disk drives are measured.

Seagate

Faradon

Seagate, PhaseShift, StarController, ST1002 CTRL and ST1002 are trademarks of Seagate Technology, Inc. Faradon is a trademark of Faradon Consumer Services, Inc. Winchester is a trademark of International Business Machines Corporation. Seagate products are not sold to the U.S. Government.

No other AppleTalk gateway



Choose an ordinary AppleTalk gateway and you better hope that your Macintosh network never grows or changes.

Choose ours and you'll welcome change. Because unlike other gateways, ours has the capacity to expand built right in.

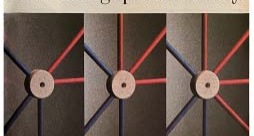
For connecting AppleTalk networks with enterprise-wide Ethernet, the GatorBox® boasts a number of features that no other gateway has.

Tunneling, for one. Which lets you connect Macintosh networks over a wide-area Ethernet backbone that doesn't use AppleTalk. No other gateway tunnels AppleTalk Phase 2 across a TCP/IP backbone.

Filtering, for another. Which gives you the control over what users, devices and printers your Macintosh users see.

What's more, the GatorBox is the only gateway that runs optional software for Macintosh that connects by — GatorShare™ for file sharing and GatorMVS™

makes adding options this easy.



No jumping. Without having to install additional card expansion software on all your computers. No hassles necessary to reconfigure your files to work with AppleTalk software.

Consider, too, that the Gatefloor has more memory and a faster processor than any competing AppleTalk gateway.

And when it comes to support, Cayman is without equal. No one comes close to having our experience at connecting AppleTalk to open networks. No service team is more responsive.

And our hardware comes with a one-year warranty—overnight replacement guaranteed.

So, if you want to make sure that you have as many options as possible in the future, you really have only one option now.

Choose the Gatefloor.

For more information about the Gatefloor, call: **617-494-1999** (ask for Orwin), Cayman Systems, 26 Landsdowne Street, Cambridge, MA 02139.

Cayman

The RenderMan imaging process
Geometric primitives are created in the modeling program
Shaders are written in the RenderMan Shading Language
Shaders are compiled
Geometric primitives are converted to RIB format
RIB stream is sent to the rendering program
RIB stream is read and interpreted
Shaders are executed
Image is displayed
Image is stored in a file
RIB stream is stored in a file

RenderMan

The goals of RenderMan are to provide a powerful, extensible, and complete interface between modeling programs and rendering programs. The RenderMan interface is designed to support the description of complex geometric models and the high-quality rendering of photorealistic images. It is also designed to support the creation of a wide variety of rendering algorithms.

The RenderMan interface is a protocol that describes the scene and its rendering parameters. It is not a rendering program. It is not a modeling program. It is not a user interface. It is not a file format. It is not a programming language. It is not a software package. It is not a standard. It is not a specification. It is not a library. It is not a toolkit. It is not a framework. It is not a platform. It is not a system. It is not a solution. It is not a product. It is not a company. It is not a person. It is not a place. It is not a thing. It is not a concept. It is not a feeling. It is not a color. It is not a sound. It is not a taste. It is not a smell. It is not a texture. It is not a temperature. It is not a time. It is not a space. It is not a dimension. It is not a universe. It is not a god. It is not a devil. It is not a heaven. It is not a hell. It is not a purgatory. It is not a limbo. It is not a nirvana. It is not a samsara. It is not a karma. It is not a dharma. It is not a tao. It is not a yin. It is not a yang. It is not a wu. It is not a wei. It is not a zen. It is not a koan. It is not a mondo. It is not a haiku. It is not a tanka. It is not a renga. It is not a senryu. It is not a kyoka. It is not a kanshi. It is not a waka. It is not a choka. It is not a sedoka. It is not a bussokusekika. It is not a kata. It is not a kumite. It is not a dojo. It is not a sensei. It is not a sempai. It is not a kohai. It is not a gaijin. It is not a yakuza. It is not a ninja. It is not a samurai. It is not a shogun. It is not a daimyo. It is not a geisha. It is not a maiko. It is not a hostess. It is not a bar. It is not a club. It is not a restaurant. It is not a hotel. It is not a ryokan. It is not a onsen. It is not a sento. It is not a public bath. It is not a private bath. It is not a shower. It is not a toilet. It is not a urinal. It is not a sink. It is not a mirror. It is not a window. It is not a door. It is not a wall. It is not a floor. It is not a ceiling. It is not a roof. It is not a foundation. It is not a basement. It is not a garage. It is not a car. It is not a truck. It is not a bus. It is not a train. It is not a plane. It is not a boat. It is not a ship. It is not a submarine. It is not a spaceship. It is not a satellite. It is not a rocket. It is not a missile. It is not a bomb. It is not a gun. It is not a knife. It is not a sword. It is not a spear. It is not a bow. It is not an arrow. It is not a shield. It is not armor. It is not clothing. It is not a hat. It is not a shirt. It is not pants. It is not shoes. It is not socks. It is not underwear. It is not a bra. It is not a tie. It is not a belt. It is not a watch. It is not jewelry. It is not a ring. It is not a necklace. It is not a bracelet. It is not earrings. It is not a piercing. It is not a tattoo. It is not a scar. It is not a wound. It is not a bruise. It is not a cut. It is not a burn. It is not a blister. It is not a rash. 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It is not a mastodon. It is not a saber-toothed tiger. It is not a cave bear. It is not a cave lion. It is not a cave hyena. It is not a cave wolf. It is not a cave fox. It is not a cave rabbit. It is not a cave mouse. It is not a cave rat. It is not a cave bat. It is not a cave spider. It is not a cave scorpion. It is not a cave centipede. It is not a cave millipede. It is not a cave tick. It is not a cave flea. It is not a cave louse. It is not a cave mite. It is not a cave chigger. It is not a cave leech. It is not a cave snail. It is not a cave slug. It is not a cave jellyfish. It is not a cave starfish. It is not a cave sea urchin. It is not a cave sea cucumber. It is not a cave sea anemone. It is not a cave coral. It is not a cave sponge. It is not a cave plankton. It is not a cave krill. It is not a cave shrimp. It is not a cave lobster. It is not a cave crab. It is not a cave crayfish. It is not a cave barnacle. It is not a cave mussel. It is not a cave clam. It is not a cave oyster. It is not a cave scallop. It is not a cave squid. It is not a cave octopus. It is not a cave cuttlefish. It is not a cave nautilus. It is not a cave chambered nautilus. It is not a cave paper nautilus. It is not a cave pearly nautilus.

Graphic worker prepares to flock out the 3D-like offramp

"Relax. With VideoQuill, you can say goodbye to the jitters, the jaggies, pixelation and chroma-crawl."

VideoQuill Character Generation Software

Now you can create professional quality titles and special effects at your desk. Using your personal computer, the same VideoQuill is the best way to create titles for video, film and multimedia. This system features resolution far superior to any of the character generators presently available for video and film applications.

VideoQuill supports all popular video formats, such as NTSC, PAL, SECAM, RGB, VGA, and SVGA. And when creating effects for film, VideoQuill supports all popular film formats, including 35mm, 16mm, 8mm, Super 35mm, Super 16mm, Academy, Cinemascope, Panavision, and Super 8. Plus, VideoQuill supports all popular computer platforms, including Macintosh, IBM PC and compatibles, and Silicon Graphics Iris workstations.

VideoQuill's powerful features include a wide variety of fonts and font styles, as well as the ability to create your own fonts. Other features include anti-aliasing, drop shadows, outlining, extruding, and the ability to import and export graphics in a variety of formats.

VideoQuill is the only character generation software that gives you the ability to create your own special effects. Whether you're creating a simple animated sequence or a complex 3D animation, VideoQuill's powerful animation tools will help you generate professional results quickly and easily.

Call today (508) 481-3700.

DATA TRANSLATION

AOL

Price: Free with ISP

Web Graphics Made Easy

America Online's Web Publishing Center is a free, online service that lets you create Web pages without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator Gold 3.0

Price: $79

Web Publishing Made Easy

Netscape Navigator Gold 3.0 is a Web browser and a Web page editor. Its WYSIWYG editor lets you create Web pages without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 3.0

Price: $49

Web Browsing Made Easy

Netscape Navigator 3.0 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 2.0

Price: $49

Web Browsing Made Easy

Netscape Navigator 2.0 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 1.0

Price: $49

Web Browsing Made Easy

Netscape Navigator 1.0 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 0.9

Price: $49

Web Browsing Made Easy

Netscape Navigator 0.9 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 0.8

Price: $49

Web Browsing Made Easy

Netscape Navigator 0.8 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 0.7

Price: $49

Web Browsing Made Easy

Netscape Navigator 0.7 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 0.6

Price: $49

Web Browsing Made Easy

Netscape Navigator 0.6 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 0.5

Price: $49

Web Browsing Made Easy

Netscape Navigator 0.5 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 0.4

Price: $49

Web Browsing Made Easy

Netscape Navigator 0.4 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 0.3

Price: $49

Web Browsing Made Easy

Netscape Navigator 0.3 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 0.2

Price: $49

Web Browsing Made Easy

Netscape Navigator 0.2 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 0.1

Price: $49

Web Browsing Made Easy

Netscape Navigator 0.1 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

Netscape Navigator 0.0

Price: $49

Web Browsing Made Easy

Netscape Navigator 0.0 is a Web browser that lets you surf the Web without knowing HTML. Choose from a variety of templates, add your own text and graphics, and publish your page to the Web. Unfortunately, the templates are boring and the graphics are limited to a few clip art images. Still, it's a good way to get your feet wet.

Rating: ★★★

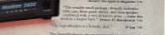
RETROSPECT REMOTE
BY STARFISH BACKUP FOR DEMOLERS

PowerDraw
The Secret Is Out.

PowerDraw
by Hammond Software

EXECUTIVES

"DYNAMITE LITTLE MODEM."



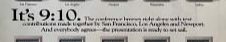
QUALITY TIME
You Have Better Things To Do Than Back Up
5
FIFTH GENERATION SYSTEMS

It's 9:01. And it's do-or-die.

All 5 offices of Vinston Vocals have just 30 minutes to finish a presentation. Together.

It's 9:05. For a moment, things run uproad. Philadelphia points out a tuck in another add. And, thanks to Aspects, they're able to clear the graphic right there for everyone to see.

It's 9:10. The conference history style along with text contributions made together by San Francisco, Los Angeles and Newport. And everybody agrees—the presentation is ready to set sail.



Introducing Aspects, the first **<u>shared resource</u>** conference software for the Macintosh.

No matter what your group project, Aspects gives you the tools to work together as a team. Not only to join in a conference remotely around the net, but also have the power to develop ideas through the process. Aspects is the only software that lets you work on the same file at the same time. Whether you're in Philadelphia or Dallas, you read, write. And see those words of their's as we see those words of yours.

Create a meeting of the minds.

Aspects is the only software that gives the power to work on the same file at the same time. Whether you're in Philadelphia or Dallas, you read, write. And see those words of their's as we see those words of yours. Aspects is the only software that lets you work together as a team. Not only to join in a conference remotely around the net, but also have the power to develop ideas through the process. Aspects gives you the tools to work together as a team. No matter what your group project.

Seeing is believing.

Call 1-800-854-8284 ext 60 for an Aspects demonstration disk. Or see your dealer today. And see how Aspects can help you get your ideas across. Clearly. Quickly. And with better results.

Macintosh is a registered trademark of Apple Computer, Inc. Aspects is a trademark of Group Technologies, Inc.

TRUE COLOR FASTER THAN

Don't settle for the number of Color You Can. And you can see how it "colors" making full use of the entire 16-million-color palette. With the Brother HL-2600CN, double-sided and Ascendant Mode, you can work with graphic-intensive images like this up to twelve times faster than before.

With 600 dpi resolution and up to 16 pages per minute, this is the highest-quality 24-bit color printer in its class. With the maximum 11" x 17" or 8½" x 14" media input, the versatile HL-2600CN can handle all 1, 2, 4, and 10 per page layouts, from spreadsheets to beautiful Tone Tones.

Raster Ops 24 Overview

YOU CAN SAY "JELLYBEANS".

Some Macintosh users refuse to upgrade. Content to use their same old monochrome screens and crappy graphics cards with only 256K of RAM. Which is why we introduced the SE/30.

And our Nubus-based models* deliver 32 bit QuickDraw* at full speed. Which helps to maximize Macintosh's obvious ease of use.

That's one of the reasons why we've sold more than 200,000 Nubus accelerator boards to date (with the next 200,000 just one Raster Ops display board, and upgrade later).

But you can't find that product line in jellybean mix. Or sold at Sam's or BJ's. Or even in our stores. And you won't find our name on your screen, either.

Raster Ops
THE ART OF PERFECTION COLOR®

REVIEWS

Personal LaserWriter NT small, solid

Personal LW NT

Apple

Price: $1,499

Requirements: Macintosh with 2MB of RAM and System 6.0.5 or later

Recommendations: Macintosh with 4MB of RAM and System 7.0 or later

Pro: Small size; quiet operation; good print quality; easy to set up and use; fast first page out; fast PostScript processing; good value.

Con: Slow printing; no paper tray; no envelope feeder; no duplexing; no networking; no expansion; no toner-saver mode; no Quick Draw mode; no Macintosh fonts; no Macintosh font substitution; no Macintosh font downloading; no Macintosh font scaling; no Macintosh font rotation; no Macintosh font shading; no Macintosh font outlining; no Macintosh font shadowing; no Macintosh font embossing; no Macintosh font engraving; no Macintosh font etching; no Macintosh font lithography; no Macintosh font screening; no Macintosh font halftoning; no Macintosh font dithering; no Macintosh font error diffusion; no Macintosh font resolution enhancement; no Macintosh font smoothing; no Macintosh font sharpening; no Macintosh font blurring; no Macintosh font noise reduction; no Macintosh font color correction; no Macintosh font gamma correction; no Macintosh font tone reproduction; no Macintosh font color management; no Macintosh font color matching; no Macintosh font color calibration; no Macintosh font color profiling; 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no Macintosh font color color ascender; no Macintosh font color color descender; no Macintosh font color color x-height; no Macintosh font color color cap height; no Macintosh font color color serif; no Macintosh font color color sans serif; no Macintosh font color color monospace; no Macintosh font color color proportional; no Macintosh font color color condensed; no Macintosh font color color extended; no Macintosh font color color bold; no Macintosh font color color italic; no Macintosh font color color underline; no Macintosh font color color strikethrough; no Macintosh font color color outline; no Macintosh font color color shadow; no Macintosh font color color emboss; no Macintosh font color color engrave; no Macintosh font color color etch; no Macintosh font color color lithograph; no Macintosh font color color screen; no Macintosh font color color halftone; no Macintosh font color color dither; no Macintosh font color color error diffusion; no Macintosh font color color resolution enhancement; 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no Macintosh font color color color photograph; no Macintosh font color color color illustration; no Macintosh font color color color drawing; no Macintosh font color color color painting; no Macintosh font color color color sketch; no Macintosh font color color color diagram; no Macintosh font color color color chart; no Macintosh font color color color graph; no Macintosh font color color color table; no Macintosh font color color color list; no Macintosh font color color color text; no Macintosh font color color color font; no Macintosh font color color color size; no Macintosh font color color color style; no Macintosh font color color color weight; no Macintosh font color color color width; no Macintosh font color color color height; no Macintosh font color color color depth; no Macintosh font color color color angle; no Macintosh font color color color position; no Macintosh font color color color alignment; no Macintosh font color color color justification; no Macintosh font color color color spacing; 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no Macintosh font color color color color color dither; no Macintosh font color color color color color error diffusion; no Macintosh font color color color color color resolution enhancement; no Macintosh font color color color color color smoothing; no Macintosh font color color color color color sharpening; no Macintosh font color color color color color blurring; no Macintosh font color color color color color noise reduction; no Macintosh font color color color color color color correction; no Macintosh font color color color color color gamma correction; no Macintosh font color color color color color tone reproduction; no Macintosh font color color color color color color management; no Macintosh font color color color color color color matching; no Macintosh font color color color color color color calibration; no Macintosh font color color color color color color profiling; no Macintosh font color color color color color color separation; no Macintosh font color color color color color color trapping; no Macintosh font color color color color color color overprinting; no Macintosh font color color color color color color knockout; no Macintosh font color color color color color color blending; no Macintosh font color color color color color color transparency; no Macintosh font color color color color color color opacity; no Macintosh font color color color color color color gradient; no Macintosh font color color color color color color pattern; no Macintosh font color color color color color color texture; no Macintosh font color color color color color color image; no Macintosh font color color color color color color photograph; no Macintosh font color color color color color color illustration; no Macintosh font color color color color color color drawing; no Macintosh font color color color color color color painting; no Macintosh font color color color color color color sketch; no Macintosh font color color color color color color diagram; no Macintosh font color color color color color color chart; no Macintosh font color color color color color color graph; no Macintosh font color color color color color color table; no Macintosh font color color color color color color list; no Macintosh font color color color color color color text; no Macintosh font color color color color color color font; no Macintosh font color color color color color color size; no Macintosh font color color color color color color style; no Macintosh font color color color color color color weight; no Macintosh font color color color color color color width; no Macintosh font color color color color color color height; no Macintosh font color color color color color color depth; no Macintosh font color color color color color color angle; no Macintosh font color color color color color color position; no Macintosh font color color color color color color alignment; no Macintosh font color color color color color color justification; no Macintosh font color color color color color color spacing; no Macintosh font color color color color color color kerning; no Macintosh font color color color color color color tracking; no Macintosh font color color color color color color leading; no Macintosh font color color color color color color baseline; no Macintosh font color color color color color color ascender; no Macintosh font color color color color color color descender; no Macintosh font color color color color color color x-height; no Macintosh font color color color color color color cap height; no Macintosh font color color color color color color serif; no Macintosh font color color color color color color sans serif; no Macintosh font color color color color color color monospace; no Macintosh font color color color color color color proportional; no Macintosh font color color color color color color condensed; no Macintosh font color color color color color color extended; no Macintosh font color color color color color color bold; no Macintosh font color color color color color color italic; no Macintosh font color color color color color color underline; no Macintosh font color color color color color color strikethrough; no Macintosh font color color color color color color outline; no Macintosh font color color color color color color shadow; no Macintosh font color color color color color color emboss; no Macintosh font color color color color color color engrave; no Macintosh font color color color color color color etch; no Macintosh font color color color color color color lithograph; no Macintosh font color color color color color color screen; no Macintosh font color color color color color color halftone; no Macintosh font color color color color color color dither; no Macintosh font color color color color color color error diffusion; no Macintosh font color color color color color color resolution enhancement; no Macintosh font color color color color color color smoothing; no Macintosh font color color color color color color sharpening; no Macintosh font color color color color color color blurring; no Macintosh font color color color color color color noise reduction; 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no Macintosh font color color color color color color color color opacity; no Macintosh font color color color color color color color color gradient; no Macintosh font color color color color color color color color pattern; no Macintosh font color color color color color color color color texture; no Macintosh font color color color color color color color color image; no Macintosh font color color color color color color color color photograph; no Macintosh font color color color color color color color color illustration; no Macintosh font color color color color color color color color drawing; no Macintosh font color color color color color color color color painting; no Macintosh font color color color color color color color color sketch; no Macintosh font color color color color color color color color diagram; no Macintosh font color color color color color color color color chart; no Macintosh font color color color color color color color color graph; no Macintosh font color color color color color color color color table; no Macintosh font color color color color color color color color list; no Macintosh font color color color color color color color color text; no Macintosh font color color color color color color color color font; no Macintosh font color color color color color color color color size; no Macintosh font color color color color color color color color style; no Macintosh font color color color color color color color color weight; no Macintosh font color color color color color color color color width; no Macintosh font color color color color color color color color height; no Macintosh font color color color color color color color color depth; no Macintosh font color color color color color color color color angle; no Macintosh font color color color color color color color color position; no Macintosh font color color color color color color color color alignment; no Macintosh font color color color color color color color color justification; no Macintosh font color color color color color color color color spacing; no Macintosh font color color color color color color color color kerning; no Macintosh font color color color color color color color color tracking; no Macintosh font color color color color color color color color leading; no Macintosh font color color color color color color color color baseline; no Macintosh font color color color color color color color color ascender; no Macintosh font color color color color color color color color descender; no Macintosh font color color color color color color color color x-height; no Macintosh font color color color color color color color color cap height; no Macintosh font color color color color color color color color serif; no Macintosh font color color color color color color color color sans serif; no Macintosh font color color color color color color color color monospace; no Macintosh font color color color color color color color color proportional; no Macintosh font color color color color color color color color condensed; no Macintosh font color color color color color color color color extended; no Macintosh font color color color color color color color color bold; no Macintosh font color color color color color color color color italic; no Macintosh font color color color color color color color color underline; no Macintosh font color color color color color color color color strikethrough; no Macintosh font color color color color color color color color outline; no Macintosh font color color color color color color color color shadow; no Macintosh font color color color color color color color color emboss; no Macintosh font color color color color color color color color engrave; no Macintosh font color color color color color color color color etch; no Macintosh font color color color color color color color color lithograph; no Macintosh font color color color color color color color color screen; no Macintosh font color color color color color color color color halftone; no Macintosh font color color color color color color color color dither; no Macintosh font color color color color color color color color error diffusion; no Macintosh font color color color color color color color color resolution enhancement; no Macintosh font color color color color color color color color smoothing; no Macintosh font color color color color color color color color sharpening; no Macintosh font color color color color color color color color blurring; no Macintosh font color color color color color color color color noise reduction; no Macintosh font color color color color color color color color color correction; no Macintosh font color color color color color color color color gamma correction; no Macintosh font color color color color color color color color tone reproduction; no Macintosh font color color color color color color color color color management; no Macintosh font color color color color color color color color color matching; no Macintosh font color color color color color color color color color calibration; no Macintosh font color color color color color color color color color profiling; no Macintosh font color color color color color color color color color separation; no Macintosh font color color color color color color color color color trapping; no Macintosh font color color color color color color color color color overprinting; no Macintosh font color color color color color color color color color knockout; no Macintosh font color color color color color color color color color blending; no Macintosh font color color color color color color color color color transparency; no Macintosh font color color color color color color color color color opacity; no Macintosh font color color color color color color color color color gradient; no Macintosh font color color color color color color color color color pattern; no Macintosh font color color color color color color color color color texture; no Macintosh font color color color color color color color color color image; no Macintosh font color color color color color color color color color photograph; no Macintosh font color color color color color color color color color illustration; no Macintosh font color color color color color color color color color drawing; 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no Macintosh font color color color color color color color color color shadow; no Macintosh font color color color color color color color color color emboss; no Macintosh font color color color color color color color color color engrave; no Macintosh font color color color color color color color color color etch; no Macintosh font color color color color color color color color color lithograph; no Macintosh font color color color color color color color color color screen; no Macintosh font color color color color color color color color color halftone; no Macintosh font color color color color color color color color color dither; no Macintosh font color color color color color color color color color error diffusion; no Macintosh font color color color color color color color color color resolution enhancement; no Macintosh font color color color color color color color color color smoothing; no Macintosh font color color color color color color color color color sharpening; no Macintosh font color color color color color color color color color blurring; no Macintosh font color color color color color color color color color noise reduction; no Macintosh font color color color color color color color color color color correction; no Macintosh font color color color color color color color color color gamma correction; no Macintosh font color color color color color color color color color tone reproduction; no Macintosh font color color color color color color color color color color management; no Macintosh font color color color color color color color color color color matching; no Macintosh font color color color color color color color color color color calibration; no Macintosh font color color color color color color color color color color profiling; no Macintosh font color color color color color color color color color color separation; no Macintosh font color color color color color color color color color color trapping; no Macintosh font color color color color color color color color color color overprinting; no Macintosh font color color color color color color color color color color knockout; 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no Macintosh font color color color color color color color color color color diagram; no Macintosh font color color color color color color color color color color chart; no Macintosh font color color color color color color color color color color graph; no Macintosh font color color color color color color color color color color table; no Macintosh font color color color color color color color color color color list; no Macintosh font color color color color color color color color color color text; no Macintosh font color color color color color color color color color color font; no Macintosh font color color color color color color color color color color size; no Macintosh font color color color color color color color color color color style; no Macintosh font color color color color color color color color color color weight; no Macintosh font color color color color color color color color color color width; no Macintosh font color color color color color color color color color color height; no Macintosh font color color color color color color color color color color depth; no Macintosh font color color color color color color color color color color angle; no Macintosh font color color color color color color color color color color position; no Macintosh font color color color color color color color color color color alignment; no Macintosh font color color color color color color color color color color justification; no Macintosh font color color color color color color color color color color spacing; no Macintosh font color color color color color color color color color color kerning; no Macintosh font color color color color color color color color color color tracking; no Macintosh font color color color color color color color color color color leading; no Macintosh font color color color color color color color color color color baseline; no Macintosh font color color color color color color color color color color ascender; no Macintosh font color color color color color color color color color color descender; no Macintosh font color color color color color color color color color color x-height; no Macintosh font color color color color color color color color color color cap height; no Macintosh font color color color color color color color color color color serif; no Macintosh font color color color color color color color color color color sans serif; no Macintosh font color color color color color color color color color color monospace; no Macintosh font color color color color color color color color color color proportional; no Macintosh font color color color color color color color color color color condensed; no Macintosh font color color color color color color color color color color extended; no Macintosh font color color color color color color color color color color bold; no Macintosh font color color color color color color color color color color italic; no Macintosh font color color color color color color color color color color underline; no Macintosh font color color color color color color color color color color strikethrough; no Macintosh font color color color color color color color color color color outline; no Macintosh font color color color color color color color color color color shadow; no Macintosh font color color color color color color color color color color emboss; no Macintosh font color color color color color color color color color color engrave; no Macintosh font color color color color color color color color color color etch; no Macintosh font color color color color color color color color color color lithograph; no Macintosh font color color color color color color color color color color screen; no Macintosh font color color color color color color color color color color halftone; no Macintosh font color color color color color color color color color color dither; no Macintosh font color color color color color color color color color color error diffusion; no Macintosh font color color color color color color color color color color resolution enhancement; no Macintosh font color color color color color color color color color color smoothing; no Macintosh font color color color color color color color color color color sharpening; no Macintosh font color color color color color color color color color color blurring; no Macintosh font color color color color color color color color color color noise reduction; no Macintosh font color color color color color color color color color color color correction; no Macintosh font color color color color color color color color color color gamma correction; no Macintosh font color color color color color color color color color color tone reproduction; no Macintosh font color color color color color color color color color color color management; no Macintosh font color color color color color color color color color color color matching; no Macintosh font color color color color color color color color color color color calibration; no Macintosh font color color color color color color color color color color color profiling; no Macintosh font color color color color color color color color color color color separation; no Macintosh font color color color color color color color color color color color trapping; no Macintosh font color color color color color color color color color color color overprinting; no Macintosh font color color color color color color color color color color color knockout; no Macintosh font color color color color color color color color color color color blending; no Macintosh font color color color color color color color color color color color transparency; no Macintosh font color color color color color color color color color color color opacity; no Macintosh font color color color color color color color color color color color gradient; no Macintosh font color color color color color color color color color color color pattern; no Macintosh font color color color color color color color color color color color texture; no Macintosh font color color color color color color color color color color color image; no Macintosh font color color color color color color color color color color color photograph; no Macintosh font color color color color color color color color color color color illustration; no Macintosh font color color color color color color color color color color color drawing; no Macintosh font color color color color color color color color color color color painting; no Macintosh font color color color color color color color color color color color sketch; no Macintosh font color color color color color color color color color color color diagram; no Macintosh font color color color color color color color color color color color chart; no Macintosh font color color color color color color color color color color color graph; no Macintosh font color color color color color color color color color color color table; no Macintosh font color color color color color color color color color color color list; no Macintosh font color color color color color color color color color color color text; no Macintosh font color color color color color color color color color color color font; no Macintosh font color color color color color color color color color color color size; no Macintosh font color color color color color color color color color color color style; no Macintosh font color color color color color color color color color color color weight; no Macintosh font color color color color color color color color color color color width; no Macintosh font color color color color color color color color color color color height; no Macintosh font color color color color color color color color color color color depth; no Macintosh font color color color color color color color color color color color angle; no Macintosh font color color color color color color color color color color color position; no Macintosh font color color color color color color color color color color color alignment; no Macintosh font color color color color color color color color color color color justification; no Macintosh font color color color color color color color color color color color spacing; no Macintosh font color color color color color color color color color color color kerning; no Macintosh font color color color color color color color color color color color tracking; no Macintosh font color color color color color color color color color color color leading; no Macintosh font color color color color color color color color color color color baseline; no Macintosh font color color color color color color color color color color color ascender; no Macintosh font color color color color color color color color color color color descender; no Macintosh font color color color color color color color color color color color x-height; no Macintosh font color color color color color color color color color color color cap height; no Macintosh font color color color color color color color color color color color serif; no Macintosh font color color color color color color color color color color color sans serif; no Macintosh font color color color color color color color color color color color monospace; no Macintosh font color color color color color color color color color color color proportional; no Macintosh font color color color color color color color color color color color condensed; no Macintosh font color color color color color color color color color color color extended; no Macintosh font color color color color color color color color color color color bold; no Macintosh font color color color color color color color color color color color italic; no Macintosh font color color color color color color color color color color color underline; no Macintosh font color color color color color color color color color color color strikethrough; no Macintosh font color color color color color color color color color color color outline; no Macintosh font color color color color color color color color color color color shadow; no Macintosh font color color color color color color color color color color color emboss; no Macintosh font color color color color color color color color color color color engrave; 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no Macintosh font color color color color color color color color color color color color correction; no Macintosh font color color color color color color color color color color color gamma correction; no Macintosh font color color color color color color color color color color color tone reproduction; no Macintosh font color color color color color color color color color color color color management; no Macintosh font color color color color color color color color color color color color matching; no Macintosh font color color color color color color color color color color color color calibration; no Macintosh font color color color color color color color color color color color color profiling; no Macintosh font color color color color color color color color color color color color separation; no Macintosh font color color color color color color color color color color color color trapping; no Macintosh font color color color color color color color color color color color color overprinting; no Macintosh font color color color color color color color color color color color color knockout; no Macintosh font color color color color color color color color color color color color blending; no Macintosh font color color color color color color color color color color color color transparency; no Macintosh font color color color color color color color color color color color color opacity; no Macintosh font color color color color color color color color color color color color gradient; no Macintosh font color color color color color color color color color color color color pattern; no Macintosh font color color color color color color color color color color color color texture; no Macintosh font color color color color color color color color color color color color image; no Macintosh font color color color color color color color color color color color color photograph; no Macintosh font color color color color color color color color color color color color illustration; no Macintosh font color color color color color color color color color color color color drawing; no Macintosh font color color color color color color color color color color color color painting; no Macintosh font color color color color color color color color color color color color sketch; no Macintosh font color color color color color color color color color color color color diagram; no Macintosh font color color color color color color color color color color color color chart; no Macintosh font color color color color color color color color color color color color graph; no Macintosh font color color color color color color color color color color color color table; no Macintosh font color color color color color color color color color color color color list; no Macintosh font color color color color color color color color color color color color text; no Macintosh font color color color color color color color color color color color color font; no Macintosh font color color color color color color color color color color color color size; no Macintosh font color color color color color color color color color color color color style; no Macintosh font color color color color color color color color color color color color weight; no Macintosh font color color color color color color color color color color color color width; no Macintosh font color color color color color color color color color color color color height; no Macintosh font color color color color color color color color color color color color depth; no Macintosh font color color color color color color color color color color color color angle; no Macintosh font color color color color color color color color color color color color position; no Macintosh font color color color color color color color color color color color color alignment; no Macintosh font color color color color color color color color color color color color justification; no Macintosh font color color color color color color color color color color color color spacing; no Macintosh font color color color color color color color color color color color color kerning; no Macintosh font color color color color color color color color color color color color tracking; no Macintosh font color color color color color color color color color color color color leading; no Macintosh font color color color color color color color color color color color color baseline; no Macintosh font color color color color color color color color color color color color ascender; no Macintosh font color color color color color color color color color color color color descender; no Macintosh font color color color color color color color color color color color color x-height; no Macintosh font color color color color color color color color color color color color cap height; no Macintosh font color color color color color color color color color color color color serif; no Macintosh font color color color color color color color color color color color color sans serif; no Macintosh font color color color color color color color color color color color color monospace; no Macintosh font color color color color color color color color color color color color proportional; no Macintosh font color color color color color color color color color color color color condensed; no Macintosh font color color color color color color color color color color color color extended; no Macintosh font color color color color color color color color color color color color bold; no Macintosh font color color color color color color color color color color color color italic; no Macintosh font color color color color color color color color color color color color underline; no Macintosh font color color color color color color color color color color color color strikethrough; no Macintosh font color color color color color color color color color color color color outline; no Macintosh font color color color color color color color color color color color color shadow; no Macintosh font color color color color color color color color color color color color emboss; no Macintosh font color color color color color color color color color color color color engrave; no Macintosh font color color color color color color color color color color color color etch; no Macintosh font color color color color color color color color color color color color lithograph; no Macintosh font color color color color color color color color color color color color screen; no Macintosh font color color color color color color color color color color color color halftone; no Macintosh font color color color color color color color color color color color color dither; no Macintosh font color color color color color color color color color color color color error diffusion; no Macintosh font color color color color color color color color color color color color resolution enhancement; no Macintosh font color color color color color color color color color color color color smoothing; no Macintosh font color color color color color color color color color color color color sharpening; no Macintosh font color color color color color color color color color color color color blurring; no Macintosh font color color color color color color color color color color color color noise reduction; no Macintosh font color color color color color color color color color color color color color correction; no Macintosh font color color color color color color color color color color color color gamma correction; no Macintosh font color color color color color color color color color color color color tone reproduction; no Macintosh font color color color color color color color color color color color color color management; no Macintosh font color color color color color color color color color color color color color matching; no Macintosh font color color color color color color color color color color color color color calibration; no Macintosh font color color color color color color color color color color color color color profiling; no Macintosh font color color color color color color color color color color color color color separation; 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A drive is a drive, is a drive... or is it?

MACH ONE DRIVES: FLI BREAKS THE 1.5MS ACCESS TIME BARRIER

FLI's proprietary technology yields a drive performance capable of only one thing: 1.5ms or less! Just 1.5ms! Mach numbers rule. No other drive is this fast.

You get the speed you need for the most demanding applications. Like video editing, CAD/CAM, and multimedia.

Mix the Mach One at Maserati - Records Rock, USA

SUPERFLOPPY - A NEW GENERATION IN FLOPPY DISK DRIVES

Now you can have the best of both worlds with massive 4-gigabyte capacities and removable cartridges! Read/write technology. Two Super-Floppy drives, 1.44MB capacity, 2MB, 4MB and 10MB compatibility. Super-Floppy drives read and write 3.5" floppy disks at 720KB and 1.44MB. The Super-Floppy also works with 4mW and 4mA optical media. Complete hardware.

- High density formatting gives you more storage while maintaining the same track and number of floppy densities.
- Backward read/write 2MB disks and files on any 1MB disk without complicated software conversion.
- Backward read/write 4MB disks and files on any 2MB disk without complicated software conversion.
- Compatible with all SCSI - equipped Macintoshes.

THE INFINITY 40 TURBO: 40MB REMOVABLE CARTRIDGE DRIVE

With FLI's Infinity 40 Turbo 40MB removable drive, you get 12ms effective access time and 1.5MB/sec transfer rate. Plus, you get the ability to add more capacity by simply adding 40MB Infinity cartridges and The Drive 40MB for that matter). You also get FLI's experience and guaranteed high quality. The Infinity 40 Turbo is the perfect solution for your data storage needs. Removable or not, it's as fast as high drive. It's quiet as a mouse. And it's not costly. Give real life backup a chance.

- Read/write drive with proprietary anti-buffer and error correction technology.
- Optional software and hardware with Sony 650 and 810 drives.
- Optional software and hardware with Fujitsu 1.3GB and 2.3GB drives.
- Firmware modified for use with Macintosh.

600MB TO 36 GIGABYTES OF ERASABLE OPTICAL STORAGE

Introducing the Infinity Optical Drive Collection. High-capacity data storage. Once you can work more than 600MB of data at a time, you'll appreciate the versatility and simplicity of FLI's optical systems. We've taken no shortcuts on performance. Or reliability. Or quality. Or anything. Software drivers and hardware are built in.

- Single drive 600MB system or two-drive 1.2GB system.
- Compatible with 4Mg, 4.5 and 5.2GB media.
- Embedded controllers, 4Mg buffer.
- 10 Gigabyte Optical System (20 Gigabyte optional).

FLI, 6160 Egret Boulevard, Newport Isle, FL 33707
Phone: 813-866-3504 Fax: 813-867-0998
415-697-2115 or FAX 415-697-9713

Some of the Mercedes Records of Fun, Records Rock in Concert

PLI

When you're developing things people have never seen before, you need a special set of tools.

Your Ethernet Just Ran Into A Major Obstacle.

You're busy installing your Ethernet network when, WHAM! You run head-on into a major obstacle. Your printer doesn't plug into Ethernet. So you can't use it unless you're willing to spend a couple of thousand dollars more on an Ethernet router.

EtherPrint To The Rescue. $699

It's a simple plug-and-print product is the first inexpensive Ethernet connection for LocalTalk printers. It connects any LocalTalk compatible printer to the Ethernet, thick, Ethernet, twisted pair or fiber optic cable systems. Quickly, easily and anywhere on the network.

EtherPrint™ supports both Phase 1 and Phase 2 AppleTalk® protocols. No matter how large your network becomes, EtherPrint can accommodate more than enough printers to handle your needs.

So when you're installing Ethernet, don't let a printer get in either the printer problem. Get EtherPrint instead and save yourself a hassle. For more information or to order, contact us at 800) 331-6155.

Dayna

We Connect People And The Computers They Use.™

Apple, the Apple logo, AppleTalk, LaserWriter, and Macintosh are registered trademarks of Apple Computer, Inc. LocalTalk is a trademark of Apple Computer, Inc. EtherPrint is a trademark of Dayna Communications, Inc. All other brand and product names are trademarks or registered trademarks of their respective holders.

You don't have to be a big spender to have a good image.

MAGNAVOX
Smart. Very smart.

Platinum Performance Just Got Better!

TWO STAR PERFORMERS JOIN TOGETHER

to provide the most dependable, industrial, fast, cost effective solution available.

All QMS Platinum Series Hard Disk Drives now include the brand Winning disk utilities SUM II™ for Windows & FAULTS sound value.

You now get the high quality and performance of the Platinum Series combined with SUM II, the most comprehensive HDD PC... Data recovery, optimization just can't be beat.

Call now for the location of your nearest QMS Dealer or for information regarding our OEM/VAR programs.

(714) 250-9555

Macintosh News

"Best Buy"

Platinum Performance

- Capacities from 20 MB to 1.2 GB in Internal and External Models
- Seek times as fast as 15.5ms
- MTBF up to 150,000 Hrs.
- Data rates up to 10.00 Mbits/sec
- Positioning
- Data Integrity
- Data Optimization
- Data Recovery
- Data Security
- Data Encryption
- Data Transfer Warranty

QMS

The name and Personal Rights of QMS, Macintosh Power Series

Great coverage.

If your national sales team could make 17 million sales calls this year, it would cover Macintosh volume buying like no sell in MacWEEK does.

MacWEEK reaches the 70,000 Macintosh volume buyers (or MVBs as we call them) that count.

Forty-two times every year.

Dealing in hard news as it breaks and reporting on the most important issues facing Mac managers, MacWEEK holds the attention of active volume buyers week after week. That's why MacWEEK is the perfect package for your advertising message.

Program advertising in MacWEEK and you hand to retail, shop-packed buyers, flawless your message during the critical buying cycle. Analyzes the purchase order jump.

Make the call we suppress Mike Ashenbo, Cover Macintosh volume buyers every week in MacWEEK.

MacWEEK

Where volume buying counts.
Call Mike Ashenbo today.

How MacWEEK covers MVBs.

Apple ships about 5,000 Macs every business day. How many of those 5,000 Macs will leave the store with your product?

Starting a portion of today's market requires selling to the Macintosh volume buyers who buy the majority of those Macs (see chart). Only MacWEEK targets these buyers — and delivers them with the frequency essential to Mac marketing success.

Why is frequency so important? Because sophisticated volume buyers are not easily sold. They require repeated sales calls and continual reassurance that a product meets compatibility standards, offers technical support and fits the corporate budget.

MacWEEK's publishing frequency gives advertisers ongoing opportunity to create and sustain a sales message throughout the volume buying cycle.

Advertising early and advertising often gives advertisers volume sales in the pages of MacWEEK.

Who will they plan how many of purchase?
Will evaluate, then purchase within 90 days
Will evaluate, then purchase within 180 days
Will evaluate, then purchase within 1 year
Will not purchase
A higher publishing frequency...
...and more readers per copy...
...results in more sales for every dollar you spend.
Based upon minimum frequency
Based upon maximum frequency

MacWEEK

If you're not buying weekly, you're losing weekly.

The envelope, please!

Envelope printers address envelopes automatically

By Bill Howard

Envelope printers are a dime a dozen, but Envelope Manager Plus from Pitney Bowes Inc. is the first I've seen that can print envelopes and return address labels. Small, stand-alone printers are suitable for the occasional envelope, but if you need a lot, you'll want the speed and flexibility of a laser printer.

Pitney Bowes' Envelope Manager Plus is a software package that runs on a PC and prints envelopes on a laser printer. It's compatible with most laser printers and software packages. Envelope Manager Plus is a terminate-and-stay-resident program that you can call up from within your word processor or spreadsheet. It's also compatible with most network software packages.

Envelope Manager Plus includes a database program that stores addresses and a mail-merge program that prints envelopes from the database. You can also print envelopes directly from your word processor or spreadsheet. The program supports a wide variety of envelope sizes and can print addresses in any direction.

Envelope Manager Plus costs $495 and requires a PC with at least 512K bytes of memory and a hard disk. It supports Hewlett-Packard Co. LaserJet printers and compatibles, as well as Canon Inc. LBP-8 printers.

Envelope Manager Plus lets you create a return address and a mailing address for envelopes.

Boson Software's NetMinder sheds light on Ethernet traffic

NetMinder displays network traffic in a variety of graphical formats.

NetMinder's Node Activity Monitor displays the traffic generated by each node on the network.

The company envelope, please!

Envelope printers are a dime a dozen, but Envelope Manager Plus from Pitney Bowes Inc. is the first I've seen that can print envelopes and return address labels. Small, stand-alone printers are suitable for the occasional envelope, but if you need a lot, you'll want the speed and flexibility of a laser printer.

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Envelope Manager Plus includes a database program that stores addresses and a mail-merge program that prints envelopes from the database. You can also print envelopes directly from your word processor or spreadsheet. The program supports a wide variety of envelope sizes and can print addresses in any direction.

Envelope Manager Plus costs $495 and requires a PC with at least 512K bytes of memory and a hard disk. It supports Hewlett-Packard Co. LaserJet printers and compatibles, as well as Canon Inc. LBP-8 printers.

Envelope Manager Plus lets you create a return address and a mailing address for envelopes.

Boson Software's NetMinder sheds light on Ethernet traffic

NetMinder displays network traffic in a variety of graphical formats.

NetMinder's Node Activity Monitor displays the traffic generated by each node on the network.

Writing unlimited.

The freedom to write and think is for all of us. Now, there is a new word processor that's just right for us, too. It's called MacWrite II, and it's made by Claris. MacWrite II makes it possible to share your ideas and thoughts with other computers and word processors. You like free-form documents from your friends on PCs, and you like all kinds of computers, and all kinds of people, and work in them without hindering.

But there's more you can do. (To borrow from a bit of XTND.) You can import graphics, not only from Macs, but many computers, customized. And you can scale and crop them, rotate and, in your MacWrite II document, flip them. MacWrite II with XTND is a powerful word processor that lets you freely exchange text and graphics. You'll find tools that your MacWrite II will recognize from other word processors, as well as text with its fresh flavor features. And you can create custom styles and save them as stationery—as well as formats you like. You'll share your ideas and letters quickly.

But what good is freedom of expression if you don't express things to a basis? That's why the page layout and editing tools in MacWrite II fit the thoughts you do as the thoughts you can. This WYSIWYG feature, by the way, is found only with MacWrite II. It's another way of saying that word processing for you, starting now is 72, 72, or 72.

Called open daily MacWrite II unveils your writing assessments and other chores. There's MacWrite II spell checking, for example, and foreign dictionary programs that are optional, and about other features that come standard. (Like a thesaurus, and a mail merge feature you'll discover soon lots of time.)

What it adds up to, you'll find, is a single word processor designed for people. All the people. It is for writers, and it is for business people. And it is for those of us in between. The freedom to write is liberating. Now technology is, too.

CLARIS

Claris is a trademark of Claris Corporation. MacWrite is a registered trademark of Apple Computer, Inc. XTND is a trademark of Claris Corporation. WYSIWYG is a trademark of Apple Computer, Inc.

If your Mac is at a loss for words, you'd better talk to Software Spectrum.

Introducing MacWrite II.

Introducing MacWrite II 1.0 and Software Spectrum 1.0.

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Catch the Latest Blockbusters from Apple at Data Preference.

Apple Computer

Comparison round

CD-ROM: Coming up to speed

Drive-by tests show where to find the best performance

by Jon Pozner

Over the past year, CD-ROM drives have undergone a dramatic change. Single-speed drives, which transfer data at 150 KB per second, have been replaced by double-speed drives, which transfer data at 300 KB per second. Triple-speed drives, which transfer data at 450 KB per second, are now appearing on the market.

Double-speed drives are the current standard for multimedia PCs. Triple-speed drives are the next step up. Quad-speed drives, which transfer data at 600 KB per second, are expected to appear in the second half of 1993.

An introductory CD-ROM drives

An introductory CD-ROM drive is the cheapest way to get into multimedia. Introductory drives are single-speed drives that transfer data at 150 KB per second. Most introductory drives are sold as upgrade kits for existing PCs. Typically, they include a CD-ROM drive, a controller card, cables, software and manuals.

Introductory drives are the slowest CD-ROM drives on the market. They're also the least expensive. Prices range from $299 to $499.

Introductory drives are a good choice for people who want to get into multimedia on a budget. They're also a good choice for people who want to upgrade their existing CD-ROM drives.

CD-ROM drive technology

CD-ROM drives are optical storage devices that use lasers to read data from CD-ROM discs. CD-ROM discs are the same size as audio CDs and can hold up to 650 MB of data.

CD-ROM drives are rated by their transfer rate, which is the amount of data they can read per second. The transfer rate is usually expressed in KB per second.

CD-ROM drives are also rated by their access time, which is the amount of time it takes them to find a piece of data on the disc. The access time is usually expressed in milliseconds.

CD-ROM drive interfaces

CD-ROM drives connect to PCs through interfaces. The most common interfaces are SCSI, IDE and proprietary interfaces.

SCSI interfaces are the most flexible and the most expensive. IDE interfaces are the least expensive and the most common. Proprietary interfaces are usually found on sound cards.

CD-ROM drive features

CD-ROM drives have a number of features that affect their performance and their price.

Multisession support allows drives to read discs that have been recorded in more than one session.

Photo CD support allows drives to read Photo CD discs.

Caddy loading makes it easier to insert discs into drives.

Tray loading is the most common loading mechanism.

CD-ROM drive performance

CD-ROM drive performance is affected by a number of factors, including the drive's transfer rate, access time, interface and buffer size.

Buffer size is the amount of memory the drive has to store data before it sends it to the PC. Larger buffers can improve performance.

CD-ROM drive prices

CD-ROM drive prices have fallen dramatically over the past year. Single-speed drives that cost $500 a year ago now cost $299 or less.

Double-speed drives that cost $600 a year ago now cost $399 or less.

Triple-speed drives are expected to cost $499 or less when they first appear on the market.

CD-ROM drive manufacturers

CD-ROM drives are made by a number of manufacturers, including Chinon, Creative Labs, Hitachi, Mitsumi, NEC, Panasonic, Sony and Toshiba.

CD-ROM drive reliability

CD-ROM drive reliability is affected by a number of factors, including the drive's mechanical design, the quality of its components and the way it is handled.

CD-ROM drive warranties

CD-ROM drives usually come with a one-year warranty. Some manufacturers offer longer warranties.

CD-ROM drive software

CD-ROM drives usually come with a number of software titles, including multimedia encyclopedias, games and utilities.

CD-ROM drive accessories

CD-ROM drive accessories include cleaning kits, caddies and cables.

CD-ROM drive troubleshooting

CD-ROM drive troubleshooting can be difficult. Common problems include the drive not being recognized by the PC, the drive not reading discs and the drive making noise.

CD-ROM drive upgrades

CD-ROM drive upgrades are usually sold as kits that include a drive, a controller card, cables, software and manuals.

CD-ROM drive buying guide

When buying a CD-ROM drive, consider the following factors:

- Transfer rate
- Access time
- Interface
- Buffer size
- Multisession support
- Photo CD support
- Caddy loading
- Tray loading
- Price
- Manufacturer
- Reliability
- Warranty
- Software
- Accessories

CD-ROM drive glossary

Access time: The amount of time it takes a drive to find a piece of data on the disc.

Buffer size: The amount of memory the drive has to store data before it sends it to the PC.

Caddy loading: A loading mechanism that requires you to insert discs into caddies before inserting them into the drive.

Interface: The connection between the drive and the PC.

Multisession support: The ability to read discs that have been recorded in more than one session.

Photo CD support: The ability to read Photo CD discs.

Tray loading: A loading mechanism that allows you to insert discs directly into the drive.

Transfer rate: The amount of data the drive can read per second.

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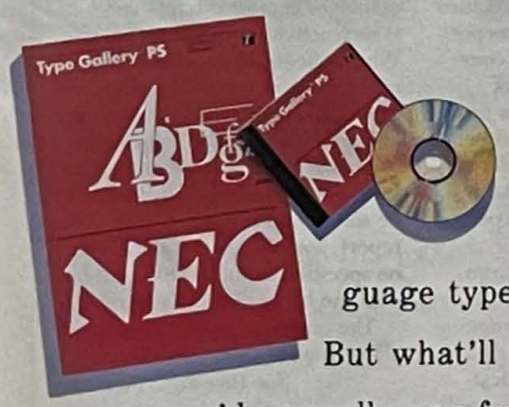

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REVIEWS

New StuffIt expands compression horizons

StuffIt Deluxe

Aladdin Systems Inc.
List Price: $99.95; upgrades $40 for registered users.

+ Compression and expansion within Finder; expands .ARC and .ZIP files; extensible; good performance.

− Doesn't expand newer, competing formats; can't include decompression code in archive.

By Loftus E. Becker Jr.

Hot on the heels of fresh competition (see MacWEEK, July 10), Aladdin Systems Inc. has upgraded Raymond Lau's StuffIt, for years the standard Macintosh file-compression utility. Aladdin has imaginatively envisioned possible uses for such a program and provided an innovative, if occasionally bewildering, variety of options to serve special needs — too many even to list in this review.

Although you can do almost as well at less cost for the basics, even the casual user may be tempted by some of StuffIt Deluxe's new features, which include on-the-fly virus checking, and archiving and expansion directly from the Finder. Power users, who should long ago have registered their copy of StuffIt, will want it at the low upgrade price. System administrators concerned with security and implementing standard procedures for users with a wide range of sophistication may find it a godsend.

A plethora of features. As a basic compression or decompression program, StuffIt Deluxe is (just barely) at the top of the class. In the style of its predecessor, it puts one or more files or folders in a compressed "archive." You can't add decompression code to the archive, but Aladdin includes a free expander that is also available on bulletin-board systems. Owners of Aladdin's ShortCut utility (Version 1.02 or later) also can search for and decompress archives in the Open File dialog box.

The program uses three primary compression algorithms, which it describes as Faster, Fast and Better. In a nutshell, Faster compression is the quickest we've seen but produces archives significantly larger than the competition; Fast compression produces files virtually the same size as the original StuffIt's default mode but about 10 percent faster; and Better compression is much slower but usually produced the smallest archives of any compression utility.

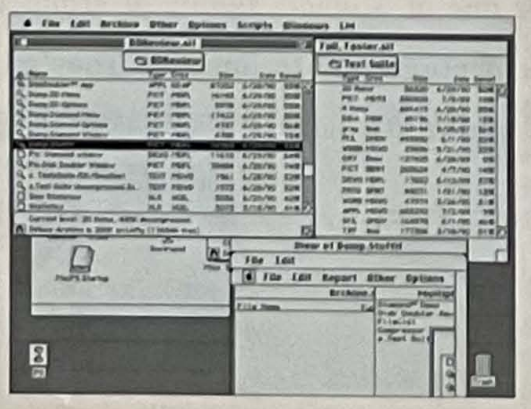
The program also can create, expand and convert archives in the "classic" StuffIt format (the old StuffIt won't expand new format archives), and segment (or rejoin) large files so they can be stored on floppy disks.

If you're going to stick to the basics, StuffIt Deluxe may not be the utility of choice, since competitive offerings (see sidebar, next page) cost less and are nearly as good at basic functions. However, for the extra money, you get many additional features and considerable potential for expansion.

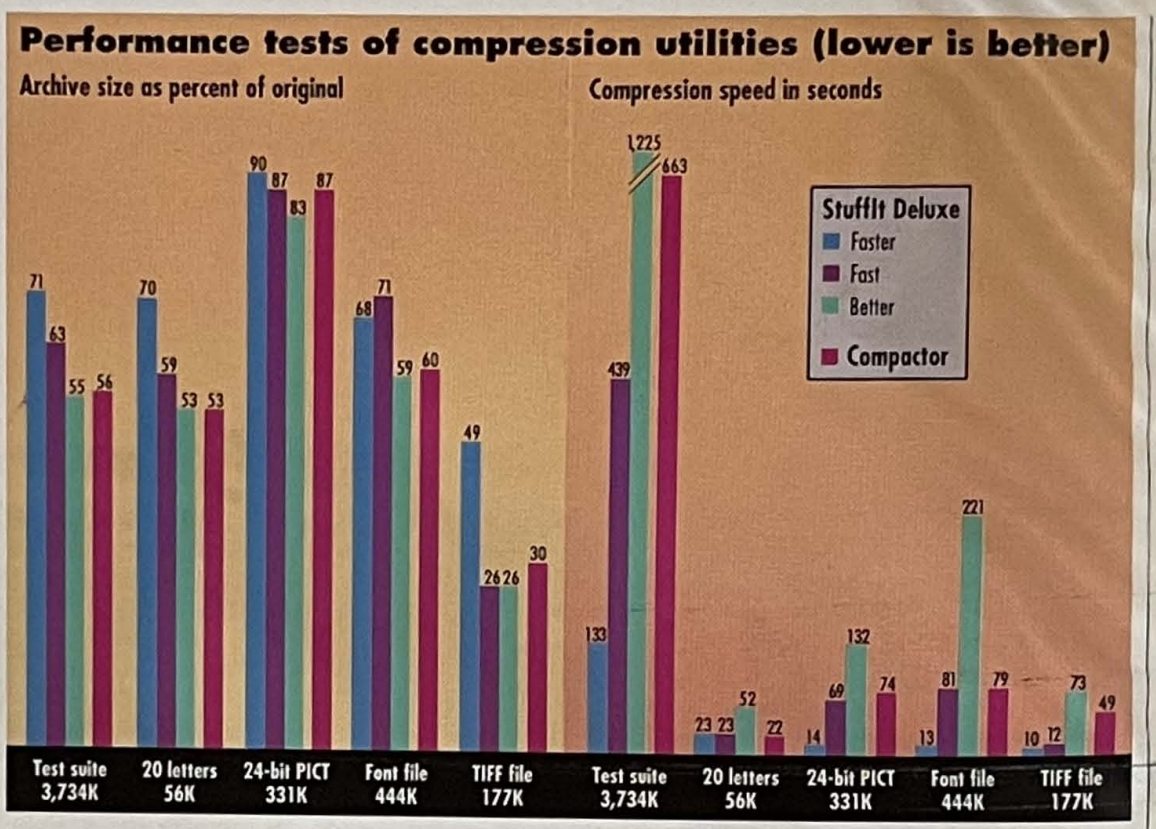
The application can check for viruses while stuffing or unstuffing. In our tests, it detected most known viruses but missed INIT 29 and WDEF. The company wisely doesn't recommend this as your only form of virus protection, but it's a worthwhile convenience for many users. StuffIt De-luxe is written to detect new strains of old viruses, and Aladdin intends to add protection as new viruses are discovered, but the company hasn't yet determined upgrade policies.

StuffIt Deluxe also will unpack files created with the old Macintosh utility PackIt and will convert files saved in the .ARC or .ZIP formats popular in the DOS world. It can't expand files created with newer, competing Mac compression

See StuffIt Deluxe, Page 138



This StuffIt Deluxe screen shows two open archives and a PICT file contained in one of the archives. PICT files can be displayed, printed and copied to the Clipboard within StuffIt.



Timeslips III 2.0: Time tracking, tricky billing

By Scott Beamer

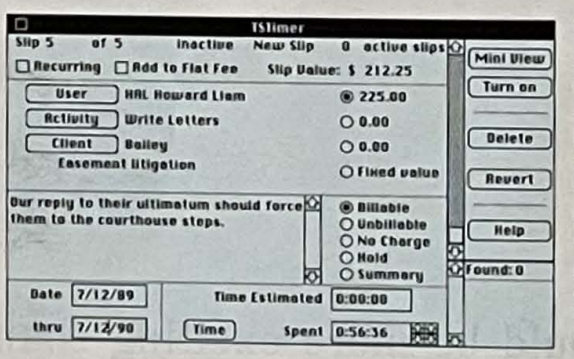
Using Timeslips III, a professional time-tracking and billing system from Timeslips Corp., can be as simple as clicking to turn the timer on and off. But lurking under the surface are complex billing and report features and a customizable interface. With both single-user and network versions available, Timeslips III 2.0 sets a standard for completeness and flexibility.

Timeslips comes with TSTimer, in both desk accessory and application versions, and TSReport, which includes the report and billing modules. The package is highly evolved, and while the elaborate feature set may intimidate some, it reflects the complex needs of real users.

Sort of guaranteed. Timeslips has a novel money-back guarantee combined with discreet copy-protection. As installed, the product will allow you to create a minimal set of about 25 time-tracking slips. After using the program for a few sessions, a window appears offering you the chance to enter the Full System code. This code enables the full data set of up to 250 users, 250 activities, 128 projects and 3,400 clients.

If purchasers find the package is not right, they can return it with an unopened Full System code envelope for a full refund. However, the company does not promise that all its dealers will honor this arrangement.

Bookkeeping netherworld. In offices running Timeslips, most people will just use TSTimer and someone else will do the billing. If this someone is a bookkeeper or accountant, there should be no problems. However, in a small office or department with no bookkeeper, some user is going to have to come to grips with the nether side of Timeslips. Billing in Timeslips turns out to be a module from an accounting package in disguise, and the person running it will be forced to deal with multilevel backups, data purges and a paper audit trail.



Using Timeslips can be as simple as selecting the TSTimer DA and clicking the Turn On button. Some will use a different slip for each phone call or expense item, others will reopen a slip over months. The Notes window can accept 32 Kbytes of notes.

Although Timeslips is very complete for time and billing work, it does not offer a complete accounting solution. However, Timeslips data files can be exported as plain text and used with a full accounting package without re-entering the data. Layered Inc.'s programs, atOnce and Insight, however, are the only standalone Mac accounting packages that can import text files. Layered expects to soon include a template with its import/export module that will make the acquisition of Timeslips data easier yet.

Who did what? Managers will find Timeslips' report module useful not only for keeping track of billing information but also as a powerful tool in the analysis of how the business is functioning. Which employee is most productive? Which activity is the bottleneck? Which clients give the most business? Diligent use of Timeslips, especially the network version, can help you discover this information.

Almost any combination of data from the individual time slips can be sorted and presented as a report, and any level of detail can be specified for bills. Different layouts can be saved for repeated use.

The graphical layout window allows the elements of the report to

See Timeslips, Page 139

Timeslips III 2.0

Timeslips Corp.
List price: $299.95; network version: $699.95 for five users.

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− Some will be overwhelmed by abundant choices; no automatic shutoff during idle time; billing and reports are complex.

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StuffIt Deluxe

From Page 136

utilities such as DiskDoubler, although it has the capacity to use special translators for such work if someone writes them.

StuffIt Deluxe purports to encode and decode BinHex files, but the claim is a little misleading. BinHex went through several versions; StuffIt Deluxe supports only one early format (usually shown by an ".hqx" suffix) that remains standard on some Unix networks. If that's your use for BinHex, you'll find the program satisfactory — even essential, since the old-format BinHex is hard to find these days. But if you want to download Macintosh files onto an IBM PC or compatible and transfer them to the Mac on disk, StuffIt Deluxe won't do the required final processing.

The program has a (so far) largely unrealized potential for expansion. Files in archives can be viewed, copied or printed with custom translators, two of which (one for text files and another for PICTs) come with this release. Since no single algorithm will be fastest or most efficient on all files, StuffIt Deluxe is designed to use compression optimizers to improve compression on particular files. The program ships with one optimizer for sounds and two for Photoshop files. The program also can call on specially written custom compressors (to create archives in DOS format, for instance), but none are shipped with the initial release. Aladdin intends to let developers know how to write such extensions once it has finished providing what it considers the basic necessary capacities.

You can create scripts to automate repetitive tasks. The average user will rarely invoke this capability, because most actions are simple anyway. However, scripting has vast potential for administrators, who can write scripts to make complex activities simple and uniform for the sometimes-naive users in their charge.

StuffIt Deluxe includes security features in addition to its capability to check for viruses. It can encrypt files using either the Data Encryption Standard (DES) or the faster, and supposedly more secure, "New DE" algorithm. Moreover, the program won't run until the original user has drawn a graphic "signature"; when these signatures, difficult although not impossible to forge, are attached to archives, users will be notified if the archive has been changed by someone else.

Reliability. We found StuffIt Deluxe highly reliable with its own format but less so with others. Several .ZIP files wouldn't expand properly even though DOS programs could deal with them; in one case, the program simply crashed. The BinHex feature occasionally refused to work at all, although restarting with no Startup documents (INITs) invariably solved this problem.

The INIT that enables compression and expansion in the Finder disabled CE Software Inc.'s new utility Alarming Events until we renamed the INIT to run after the Notification Toolbox file that CE Software provides. Not all the extensions worked as they should: The sound optimizer gave no improvement on three sound files; the PICT viewer wouldn't print some pictures; and the text file viewer is limited to 32-Kbyte chunks, limiting its utility with large files. It's too bad that Aladdin didn't follow the lead of On Technology Inc. and tie

See StuffIt Deluxe, next page

Other compression utilities

In recent months, StuffIt has received some stiff competition. Salient Software Inc.'s DiskDoubler, reviewed in our July 10 issue (and now up to Version 3.0, a significant upgrade), is also fast and quite efficient. Usable directly from the Finder, the $79 DiskDoubler includes features that make it particularly well-suited for use when disk space is at a premium, such as automatic launching of expanded documents. Mac Portable users, in particular, might prefer it for that reason.

A new kid on the block is Compactor, a $25 shareware product available on many bulletin boards. Compactor was typically within a few percentage points of StuffIt Deluxe's best compression size (see tables, Page 136) and almost twice as fast. Although it can't compress or expand files from the Finder, it can optionally add about 10 Kbytes of decompression code to its archives, so they can be decompressed by anyone with a Mac.

Neither DiskDoubler nor Compactor includes the features that will make StuffIt Deluxe popular with network administrators. But individuals on a budget looking for fast and efficient compression and expansion might find either of these their program of choice.

Salient Software Inc. is located at 3101 Avalon Court, Palo Alto, Calif. 94306; (415) 852-9567; (800) 326-0092.

Compactor also may be purchased directly from the author, Bill Goodman, at 109 Davis Ave., Brookline, Mass. 02146. — *By Loftus E. Becker Jr.*

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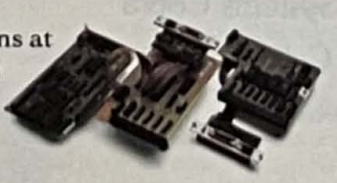

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Timeslips

From Page 136

be arranged on the page. However, no font or style changes can be made. For that, you must export the file as text and dress it up in a word processor — a clunky solu-tion at best. The billing layout window, however, permits full formatting and includes drawing tools for lines and boxes. Logos can be imported and placed on both reports and bills. Many reports can be displayed as bar graphs and pie charts. All reports can be output to screen, printer or disk.

Pitfalls. While we were impressed with Timeslips' completeness, we also found several potential problems. For instance, while Timeslips begins with a folder of only eight data files, this number multiplies as the program creates internal backups, default settings and text files. The individual data files quickly become too large to fit on a single floppy. All this can combine into a nightmare of data management.

In addition, although Timeslips offers immense flexibility to the user, the myriad choices can become a problem to the unwary. Those who dive in without reading the manual will find Timeslips surprisingly easy to use in most situations. There are Help buttons in almost every window, but there are also many other buttons and choices in each window — and many of those open still more windows.

Further, the simple rule that you must turn TSTimer off once it has been turned on covers more than you might expect. Shifting applications under MultiFinder, doing nothing for long periods and even turning the Mac off do not stop TSTimer. There is nothing to warn the user that the clock is running, and if people forget about the timer, the value of the data is diluted. The office Timeslips expert can limit the amount of damage by astute use of the built-in password security system. As with all other parts of Timeslips, the multilevel password system is highly customizable.

Documentation and support. Timeslips' tech support is modeled after that of accounting software: It is free for 30 days from the first phone call. On-demand service starts at $10 per call after that; yearly support subscriptions begin at $100. Timeslips Corp. also offers a service to attempt to recover data files damaged by hard disk crashes. There is a fee only if successful.

The manual is first-rate, despite a handful of variances between what the manual tells you to expect and what you actually see on-screen. There is no hint in the manual or program of Timeslips' DOS heritage.

Conclusions. The thing most pleasing about Timeslips III is that the program, the manual and the tech support reveal an exacting attention to detail. Timeslips users can vary from a solo desktop publisher to a network of lawyers, and for most of those people, the program will be an easy-to-use, valuable tool to help track what they do all day and bill the right clients for their time.

Someone is going to have to compile those time slips into bills, however, and the billing end of the program is as complex as any accounting program. Make sure to allow enough time for the training of this person.

Timeslips Corp. is located at 239 Western Ave., Essex, Mass. 01929; (508) 768-6100; (800) 338-5314. □

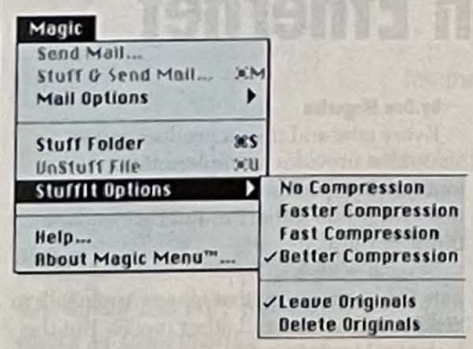
StuffIt Deluxe

From previous page

into the Claris translators, allowing the many file types that those translators support to be viewed within archives.

Conclusions. StuffIt Deluxe is a worthy and feature-rich successor to the original StuffIt. Its capability to stuff and expand archives from the Finder, a feature otherwise available only in DiskDoubler, is a joy to use. Features such as scripting and hooks to Microsoft Mail and QuickMail will be welcomed by large system administrators. Version 1.0 is not bug-free, and its potential for expansion remains largely unrealized. But overall, StuffIt Deluxe is a reliable product with great potential.

Aladdin Systems Inc. is located at Deer Park Center, Suite 23A-171, Aptos, Calif. 95003; (408) 685-9175. □



With the Magic menu, StuffIt Deluxe's addition to the Finder, you can compress and expand files and send electronic mail.

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Matthew Carter

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Matthew's career started over 30 years ago, cutting punches for hot metal type. He and a number of Bitstream's senior designers previously worked at Linotype, where they contributed to the building of its type library (you know, the one Adobe sells). When the time came to build the Bitstream® Typeface Library, they discovered what is ultimately true of all things— you do a better job the second time around.

Matthew won the Frederic W. Goudy Award in 1986 for his contributions to the printing industry. And as Bitstream's most important face, he continues to make a mark in the ever-evolving world of type. Matthew's not for sale, but some faces just need to be seen to be appreciated.

For more information on the Bitstream Typeface Library, call Bitstream at 1-800-237-3335.

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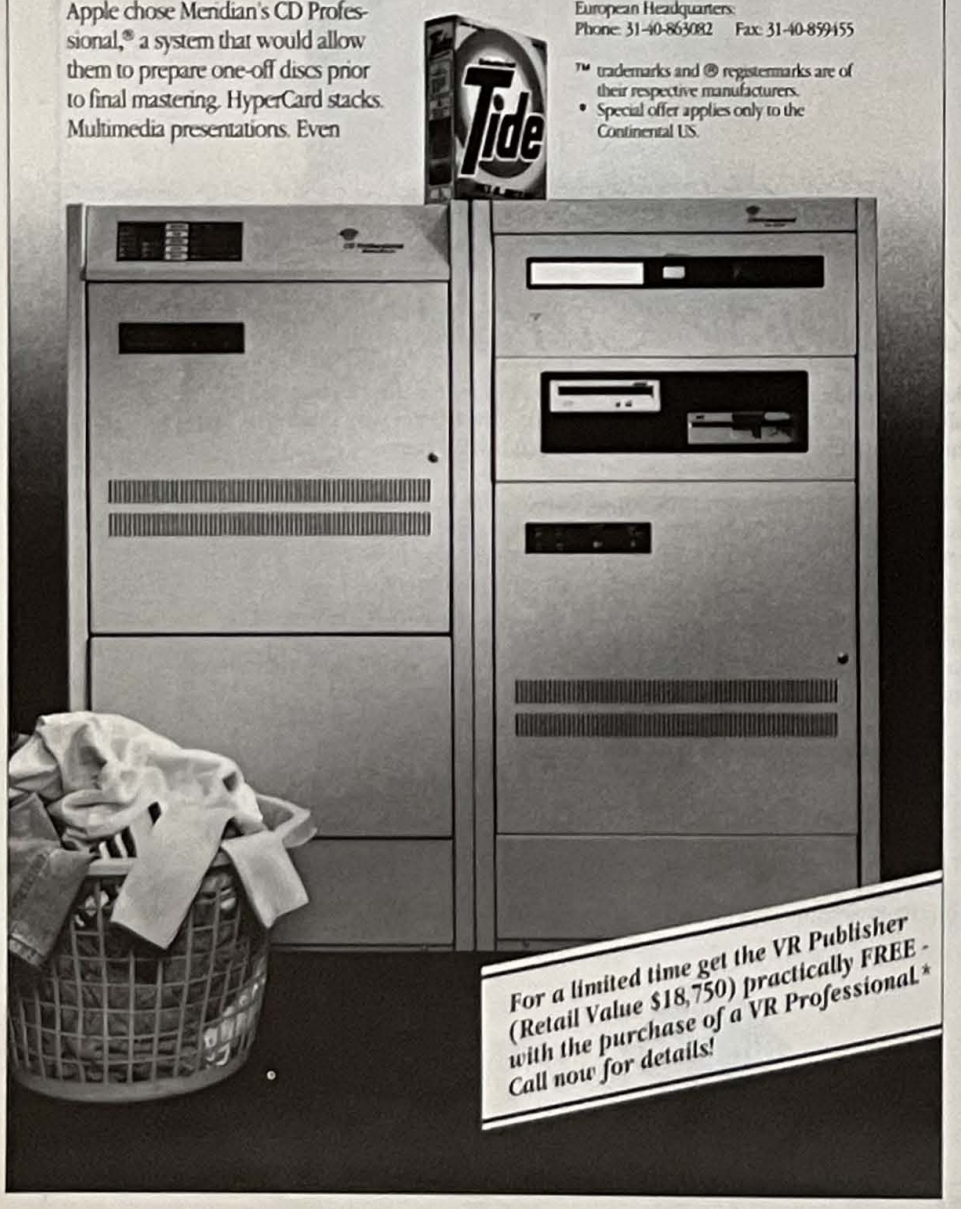
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REVIEWS

Aranda: Modern CASE

Useful addition to arsenal of Pascal tools

Aranda 1.01

Soft-SET Technologies Inc.
List price: $995

+ Performs code parsing for Pascal programs that communicates a program's internal structure through diagrams; can paste reports to other applications; surprisingly easy to use.

− Uses one window for all reports; cannot parse compiler directives; doesn't yet support languages other than Pascal.

By Linda Custer

Professional programmers often encounter projects that involve working with someone else's source code. They might just be adding a few features to an existing program or fixing a bug, or they might be borrowing the code from a paint program that handles memory errors and trying to adapt it to a word processing program.

Aranda 1.01 from Soft-SET Technologies Inc. is designed specifically to help programmers work with unfamiliar code. It parses any program from Macintosh Programmer's Workshop Pascal or Symantec Corp.'s THINK Pascal and generates flow and organizational diagrams that communicate the program's internal structure. It also answers questions about which routines can modify variables and where.

In addition, Aranda can assist project members who are not programmers. Aranda's reports can be pasted into documentation so a thorough print record of code structure can be maintained. Aranda can help project managers determine how programs are progressing when many programmers are working on various modules. Lastly, Aranda can help testers ensure that no program parts go untested.

Analyzing code. Analyzing a project starts by adding source-code files to a blank Aranda project work space. All the source files known to be part of a project are displayed as icons. Next, a contents report is generated for each file so Aranda can catalog all identifiers and display them with symbols that indicate what kind of identifier each is (class, constant, data type, label, method, parameter, routine, unit, variable or undefined).

Once a contents report has been generated, it can be queried. Because object-oriented programs are fully supported, class hierarchies can be charted. Variables and methods belonging to a class can be displayed graphically with the Class command.

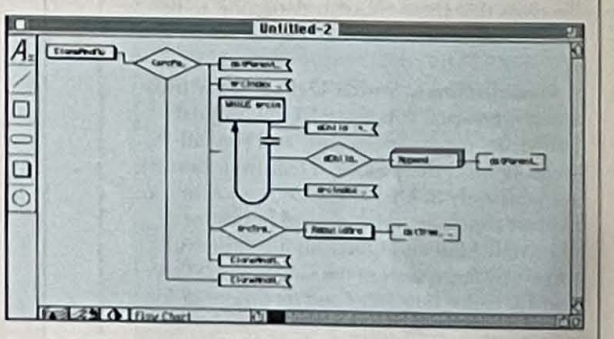
Similarly, the Imports command can be used with any routine selected to create a diagram of all data types, constants, variables, functions and procedures used by the selected routine. Double-clicking on functions and procedures displayed this way will, in turn, extend the diagram to detail the items that those functions and procedures import.

Flow charts can be produced for any routine. Cross-reference trees (diagrams that show all the procedures and functions using a particular identifier) can be generated, as well as a listing of all routines that directly modify a variable.

Zeroing in. All of Aranda's diagrams and charts are produced in the same window. Navigation tools, provided at the bottom left of the window next to the scroll bar, assist in returning to the original contents report or navigating through other reports. Any diagram can be expanded or reduced so the window displays whatever sections are of interest. A source-code view is available whenever needed.

Reports can be filtered to eliminate

See Aranda, Page 142



Aranda clarifies undocumented code by generating flow charts of any routine in Pascal programs. Though all the graphical information appears in one window, there are navigation buttons in the window frame.

Put a printer on Ethernet

EtherPrint

Dayna Communications Inc.
List price: $495

+ Puts a laser printer on Ethernet; easy to configure; several media options.

− Our review unit had problems with complex AppleTalk Phase 2 networks.

By Dan Magorian

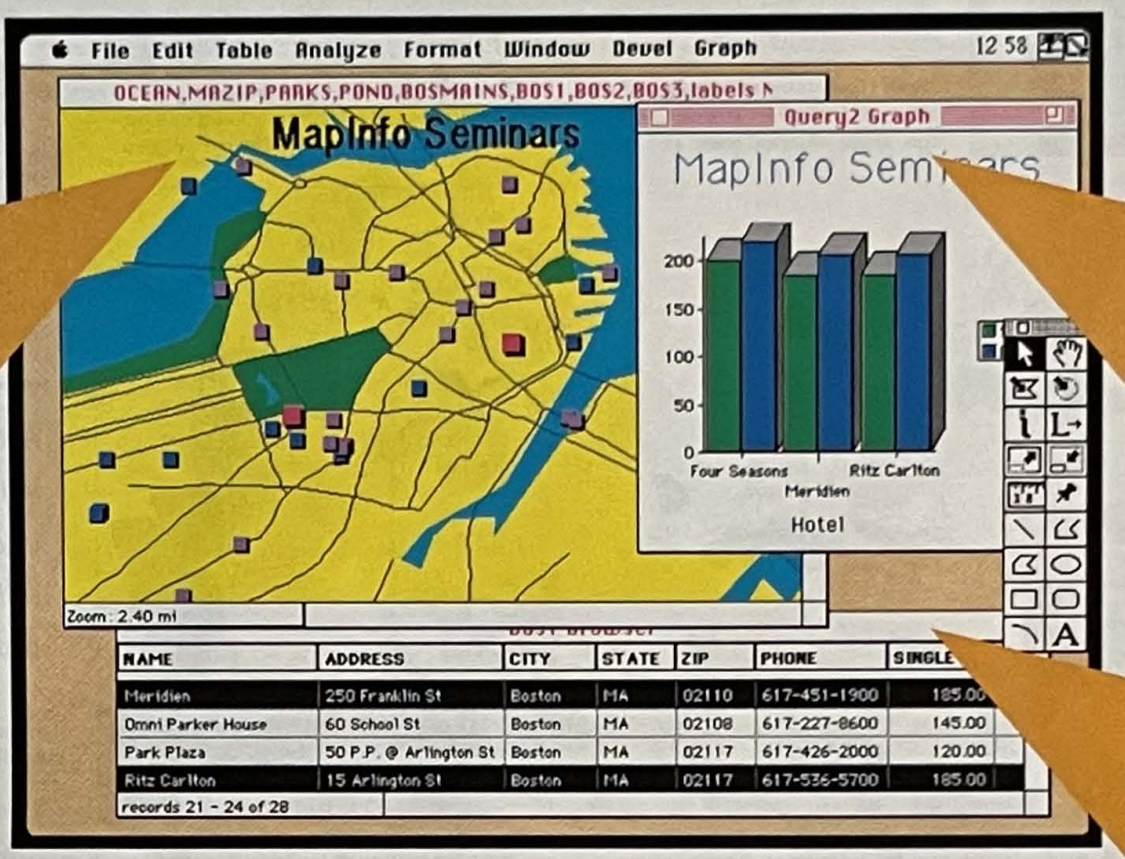
Every now and then a product comes along that provides a simple solution to a longstanding problem. Dayna Communications Inc.'s new EtherPrint network adapter is one of these.

Several years ago Apple declared its alternate cabling strategy that allows AppleTalk to run over Ethernet and other media. But the lack of a Mac-compatible laser printer with on-board Ethernet has been an obvious gap

See EtherPrint, Page 144

New!

See Your Data!



The Mapper
Automatically attach your data to *any* object on the screen: a point, a boundary or a line. Analyze data on street maps, or by ZIP codes, counties, cities, states and the world.

The Grapher
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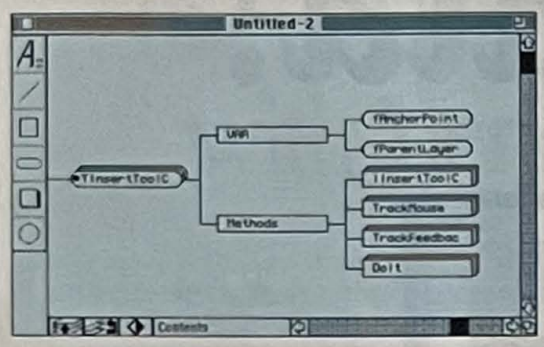


Aranda's Contents command catalogs and symbolizes all identifiers in a program according to type, making subsequent queries easy.

Aranda

From Page 140

unwanted detail. Double-clicking on any identifier hides all the information below the identifier. In addition, a Filter tool is provided for restricting reports to exclude, for example, all classes and methods.

Aranda also can provide detail about identifiers in notes. Aranda fills in notes with up-to-date information about which routines use the identifier and other linkage information. Any standard Macintosh text or graphic (including screen dumps of related Aranda reports) also can be added to the notes to make the identifier documentation complete.

Details. Aranda is surprisingly easy to use for the wealth of information it can provide. Questions about both the overall structure of a program and the role of a particular function or variable can be answered with just a few simple menu commands. No online help is provided, but the manual is clear and concise (about 80 pages). Telephone support is free for 30 days and available for an annual fee thereafter.

Aranda requires a 68020 or 68030 processor and at least 2 Mbytes of RAM. It implements a virtual-memory scheme that requires hard disk space equal to about twice the size of the code being analyzed and can analyze software projects of up to 8 Mbytes. It can work with MultiFinder alongside a development system.

Currently, only Pascal can be parsed. Soft-SET plans to support C, C++, Cobol and Fortran in future releases. Soft-SET also plans to add tools to monitor code complexity by standard measures and to assist in testing isolated routines.

Aranda provides a set of well-implemented tools that assist every member of a software development team to understand what's happening.

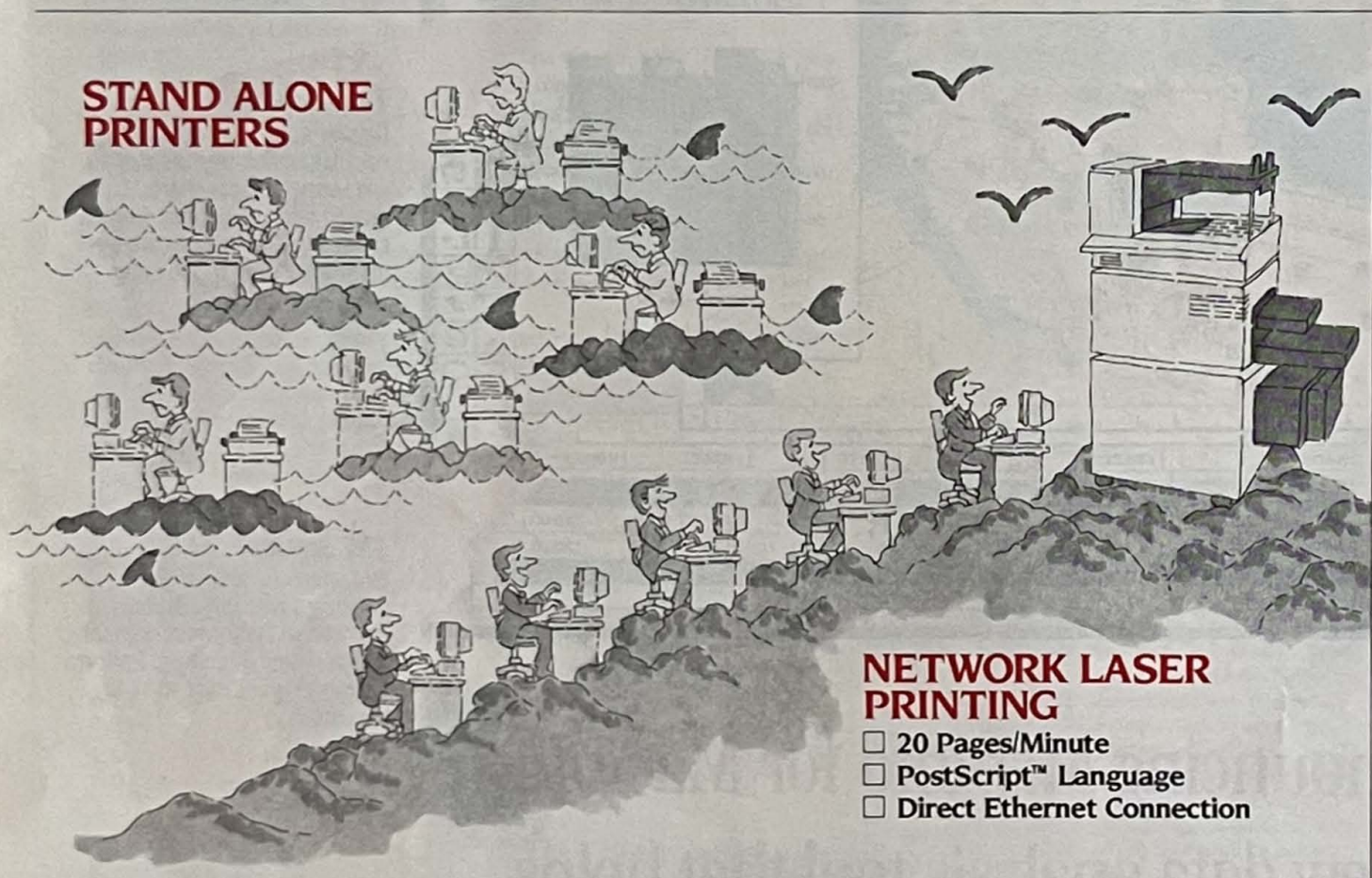
Conclusions. We uncovered only two minor annoyances in Aranda. The first is that Aranda has no window-management facilities. All reports appear in the same window, and using the navigation tools to get from one to another is much less intuitive than simply having different reports appear in different windows. The second is that compiler directives are not parsed at all by Aranda, so code that depends on compiler directives for proper syntax cannot be analyzed. Both of these concerns should be addressed in upcoming releases.

Aranda provides a set of well-implemented tools that assist every member of a software development team in understanding what is happening inside a Pascal program. New programmers trying to work with code they've inherited, as well as veteran programmers who are reviewing code they wrote a few years ago, can use Aranda to give them an instant understanding of what's happening inside the program.

Other non-programming members of the team also can benefit. Project managers and code testers can use Aranda to unveil the structure of the code they are reviewing and to see how modules from various programmers will fit together. Perhaps most importantly, Aranda assists in documenting code and keeping documentation up-to-date as code is revised. Its flow charts and linkage charts can be mixed with raw source code and text to provide a thorough record of each routine's role.

Aranda is a useful addition to the arsenal of tools available to any Pascal programming team. It provides a simple way for team members to communicate effectively and to maintain the code of others. It represents one of the better attempts to bring modern computer-aided software-engineering concepts to the Macintosh, and it can even analyze Pascal code written for other computers.

Soft-SET Technologies is at #301-1847 W. Broadway, Vancouver, British Columbia, Canada V6J 1Y6; (604) 734-1622. □



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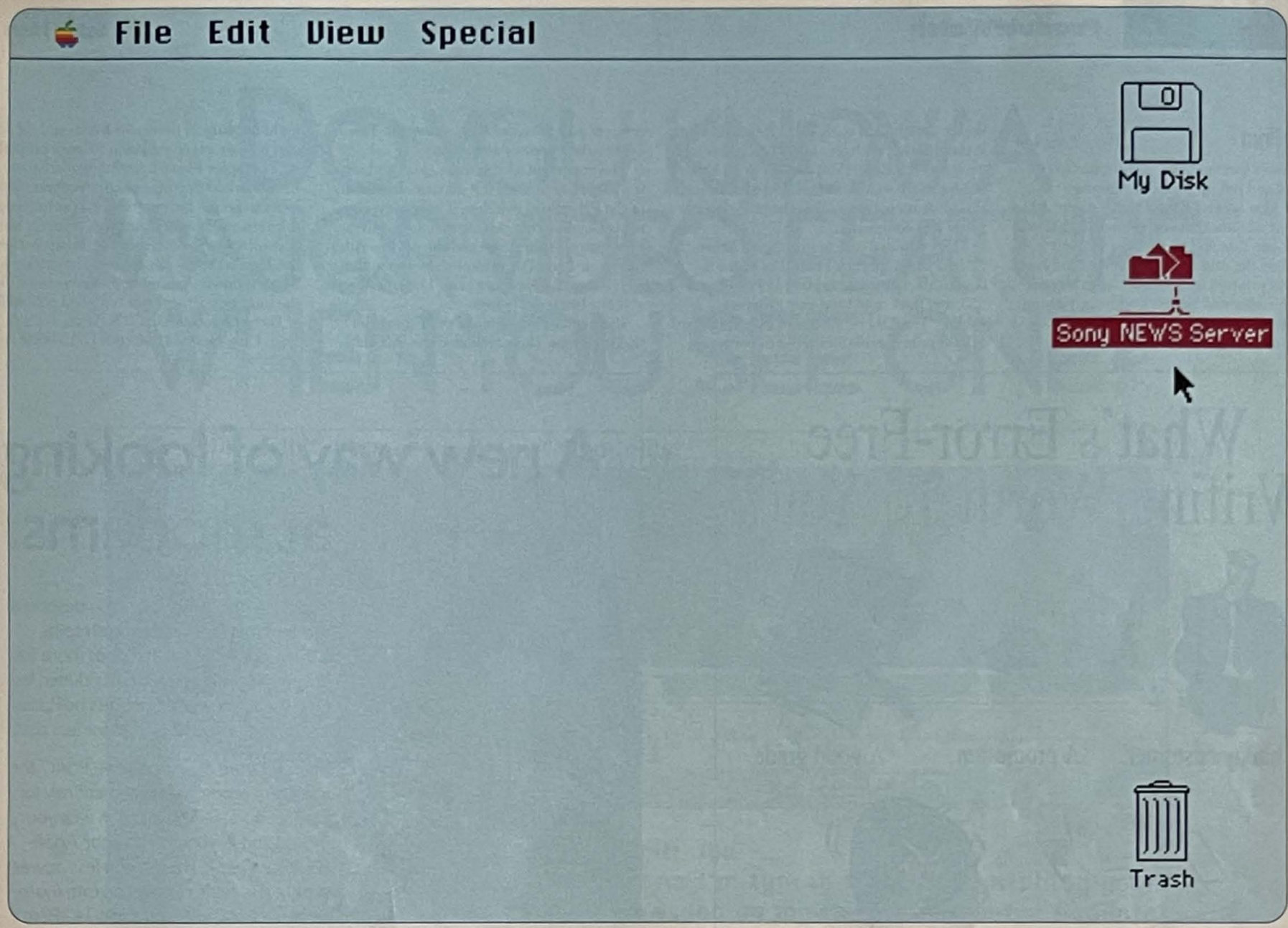

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EtherPrint

From Page 140

ever since, forcing many institutions to run routers and put up zones just to print.

The idea behind EtherPrint is to provide a low-cost adapter that you connect to Ethernet on one side and the printer of your choice on the other. It acts transparently as a "pseudo printer" on Ethernet, with its own node number and network address, passing packets to and from the real printer attached on the other side. There can be only one device attached to each EtherPrint, although it should work with any LocalTalk printer. In addition, the EtherPrint can act as an Ethernet interface to Mac Pluses and SEs, though this gives no performance advantage over a LocalTalk connection.

Three external switches configure EtherPrint to use AppleTalk Phase 1 or Phase 2, AppleTalk node numbers 0 to 127 or 128 to 255, and thick or twisted-pair Ethernet cabling. The EtherPrint comes with a standard DIN-8 printer cable and DB-9 converter for printers with the older-style connector. Two lights indicate power and activity.

The documentation is quite clear, and setup is a snap. You turn off the printer; change any of the EtherPrint switches, if necessary; connect the unit to the cabling and the printer; then turn on EtherPrint and the printer. After that, your LocalTalk printer shows up in the Chooser in the Ethernet zone, but otherwise it acts just like it did before.

Early production runs of the EtherPrint had problems. Dayna recalled the first shipment because of defective RAM, and the second unit we received failed to work properly on a complex Phase 2 test network. EtherPrint worked fine on smaller networks, and it looks to be the best method for putting laser printers on Ethernet. At $495, it hardly seems cost-effective for attaching an ImageWriter, but Dayna clearly has made efforts to keep the cost down. Assuming the company shakes the bugs out, EtherPrint has good potential.

Dayna is located at 50 S. Main St., Salt Lake City, Utah 84144; (801) 531-0600. □

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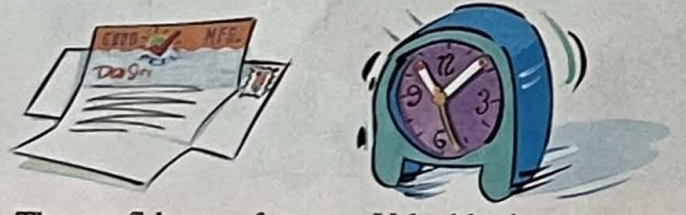

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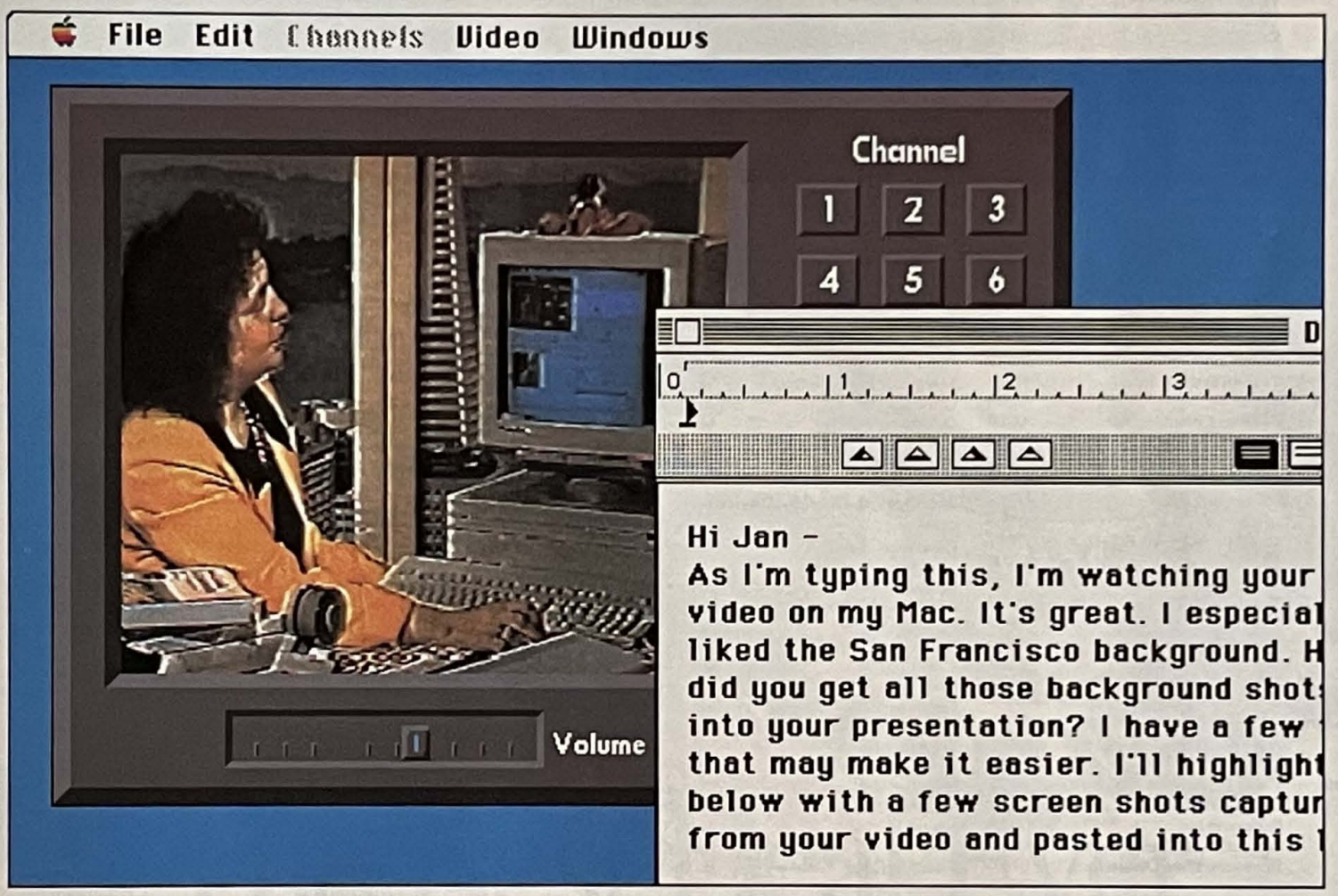
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The Year (so far) in Reviews

The following is a list of all products reviewed in MacWEEK in 1990, together with the issue date, for your reference. Items with an asterisk were covered in Reviews in Brief.

Accounting & Personal Finance

CheckWriter II*	Aatrix	02/20
MacInTax 1040, Personal Ed.	Softview Inc.	02/20
Managing Your Money 3.0	Meca Ventures Inc.	02/20

Communications & Networking

Communicae	Active Ingredients Inc.	04/10
DaynaNET	Dayna Communications Inc.	04/24
Echo II*	Novell Inc.	05/08
EtherGate	Shiva Corp.	02/27
EtherPeek	The AG Group	05/01
Flash	Beagle Bros. Inc.	03/27
FlexFax	Circuit Research Corp.	04/03
GetMyAddress*	The AG Group	05/08
InBox Plus 3.0	Sitka Corp.	05/15
InterFax	Abaton Technology	04/03
LANalyzer Network Analyzer	Novell Inc.	05/01
Lanview Network Analyzer	Cabletron Systems Inc.	05/01
LANWatch	FTP Software Inc.	05/01
LapLink Mac III*	Traveling Software Inc.	04/17
Look*	Novell Inc.	05/08
MacIRMA 1.2	Digital Communications Associates Inc.	05/08
MacMainFrame II/DFT	Avatar Technologies Corp.	05/08
MacToken*	EDI Communication	06/19
MD-DOS/IP	Wise-Ware	05/01
MicroPhone II 3.0	Software Ventures Corp.	02/13
Microsoft Mail 2.0	Microsoft Corp.	03/06
NetMap*	Advanced Electronic Support Products Inc.	06/19
NetModem V.32	Shiva Corp.	06/12
Netway 1000 and 2000	TriData Systems Inc.	05/08
NodeCheck 3.0*	Apple	05/08
NodeHint*	Farallon Computing Inc.	05/08
Orchid Fax	Orchid Technology Inc.	04/03
Peek	Apple	05/01
Peek-to-Rez*	Apple	05/08
Photolink	Photonics Corp.	05/08
Poke*	Apple	05/08
ProModem 2400M Fax	Prometheus Products Inc.	04/03
QuickMail 2.2.2	CE Software Inc.	03/06
SendEcho*	Dayna Communications Inc.	05/08
Tefax RA2110M	Relisys	02/20
The Sniffer	Network General Corp.	05/01
TurboStar Network Hub	Nuvotech Inc.	02/13
Watch	Cayman Systems Inc.	05/01
White Knight 11.04	The FreeSoft Co.	02/13

Computer-Aided Design

Aperture	Aperture Technologies Inc.	04/03
AutoCAD Release 10	Autodesk Inc.	01/23
Dimensions Presenter	Visual Information Development Inc.	03/27
DrawTools 1.1*	Paracomp Inc.	06/19
MacBRAVO! 2.0	Schlumberger Technologies	01/23
MacDraft 2.0	Innovative Data Design Inc.	07/10
MacPlot	Microspot	05/22
Mesa Graphics Plotter Utility	Mesa Graphics Inc.	05/22
MicroStation Mac 3.5	Intergraph Corp.	01/23
Origins 1.02	Deltasoft Inc.	03/20
PlotMaker	Graphisoft	05/22
PLOTTERgeist	Palomar Software Inc.	05/22
StrataVision 3d	Strata Inc.	03/27
Zing	Enabling Technologies Inc.	03/27

Computers & System Software

Colby SE-30	Colby Systems Corp.	02/20
Dynamac SE/30	Dynamac Computer Products Inc.	02/20
Macintosh IIfx	Apple	04/10
Macintosh Portable	Apple	02/20
Outbound Laptop System	Outbound Systems Inc.	06/19
SoftPC EGA/AT	Insignia Solutions Inc.	05/22
T1000SE	Toshiba America Information Systems Inc.	06/19
Windows 3.0	Microsoft Corp.	06/26

Databases & Forms Processors

4D Mover*	ACIUS Inc.	06/05
File Force	ACIUS Inc.	05/22
GeoQuery 2.0	Odesta Corp.	04/17
Panorama 1.5*	ProVUE Development Corp.	01/23

Desktop Publishing

DesignStudio	Letraset	01/23
Fontographer	Altsys Corp.	05/08
Fonts	various vendors	07/31
FontStudio	Letraset	05/08
FrameMaker	Frame Technology Corp.	07/31
Metamorphosis	Altsys Corp.	03/27
PageMaker 4.0	Aldus Corp.	06/05
ParaFont 1.02*	Design Science Inc.	02/27
RagTime 3	RagTime USA	03/20
Tycho	Macreations Inc.	03/20
TypeAlign 1.0.2*	Adobe Systems Inc.	02/27
TypeStyler	Broderbund Software Inc.	02/06

Graphics

Color MacCheese	Delta Tao Software Inc.	06/26
ColorStudio	Letraset	03/13
ColorStudio	Letraset	04/10
Easy Color Paint 1.1*	Creative Software	04/03
PhotoMac 1.14	Data Translation Inc.	04/10
Photoshop	Adobe Systems Inc.	04/10
The Art Importer 2.0*	Altsys Corp.	01/16
UltraPaint	Deneba Software Inc.	04/17
VideoPaint*	Olduvai Corp.	07/10

Input Devices

Kurta IS/ADB	Kurta Corp.	04/24
Kurta Studio	Kurta Corp.	04/24
On-Command	Computer Support Corp.	04/10
Remote Mouse*	Forte Communications Inc.	06/19
SD-420L	Wacom Inc.	04/24
Silent Partner*	Presentation Electronics Inc.	06/19
Smart Remote	Sayett Technology	04/10
SummaSketch II	SummaGraphics Corp.	04/24
Wiz	Calcomp Inc.	04/24

Mass Storage Devices

CMO600	La Cie Ltd.	01/16
Fastback Tape FB120	Fifth Generation Systems Inc.	04/17
Genesis 6000	MacSetra Technologies International Inc.	01/16
HammerDisk600	FWB Inc.	01/16
Infinity Optical	Peripheral Land Inc.	01/16
Light Disk	Summus Computer Systems	01/16
MacBack 8000	Advanced Digital Information Corp.	04/10
MacinStor Erasable Optical	Storage Dimensions Inc.	07/31
Optical 600 Plus	Relax Technology	01/16
OR650	Microtech International Inc.	01/16
REO-650	Pinnacle Micro Inc.	01/16
RSSM600	Sumo Systems	01/16

Monitors & Display Devices

C30A	Spark International Inc.	06/19
ClearVue/GS and 19-inch monitor	Radius Inc.	05/15
ColorBoard 264	RasterOps Corp.	07/10
ColorBoard 264/SE30	RasterOps Corp.	06/19
ColorBoard 364	RasterOps Corp.	06/26
ColorBoard 708+/SE30	RasterOps Corp.	06/19
ColorCard/24	SuperMac Technology	07/10
ColorSpace FX	Mass Microsystems Inc.	04/17
ColorSpace IIi	Mass Microsystems Inc.	04/17
DigiVideo	Aapps Corp.	06/26
DigiVideo Color	Aapps Corp.	06/26
Display Card 8•24	Apple	07/10
DrawingCard	Calcomp Inc.	05/15
MegaScreen 3008	MegaGraphics Inc.	06/19
MicroTV	Aapps Corp.	02/06
Pivot	Radius Inc.	04/10
Precision Color	Radius Inc.	04/10
QuickCAD Graphics Engine	Radius Inc.	03/13
QuickColor	Radius Inc.	03/13
QuickView Z21 IQ	E-Machines Inc.	05/15
Spectrum/24 Series III	SuperMac Technology	03/13
Spectrum/8 Series III and 19-inch monitor	SuperMac Technology	05/15
T19 SE/30	E-Machines Inc.	06/19
Xceed SE/3010-78	Micron Technology Inc.	06/19
Xceed SE/306-48	Micron Technology Inc.	06/19

Numeric Tools

Data Desk 3	Odesta Corp.	01/09
DeltaGraph 1.5	DeltaPoint Inc.	04/24
JMP	SAS Institute	01/09
M. Y. O. B.	Teleware Inc.	03/20
Minitab Release 6	Minitab Inc.	06/05
SPSS 4.0	SPSS Inc.	06/05
Spyglass View and Transform	Spyglass Inc.	07/10
SuperANOVA 1.01	Abacus Concepts Inc.	02/06
Systat 5.0	Systat Inc.	06/05

Organizational Tools

Address Book Plus*	Power Up Software	02/06
Dynodex 1.1*	Portfolio Systems	02/06
FastTrack Schedule	AEC Management Systems Inc.	05/01
Great Gantt!	Varcon Systems Inc.	05/01
IdeaFisher	Fisher Idea Systems Inc.	06/19
In/Out	CE Software Inc.	05/08
KeyPlan	Symmetry Software Corp.	05/01
MacPhonebook 2.01*	Synex	02/06
MacProject II 2.0	Claris Corp.	05/01
Rendezvous*	PMC Telesystems Inc.	01/09

Presentations

Director 2.0*	MacroMind Inc.	06/12
MacroMind Accelerator*	MacroMind Inc.	03/13
MacroMind Player*	MacroMind Inc.	03/13
MORE 3.0	Symantec Corp.	07/31
Persuasion 2.0	Aldus Corp.	02/13

Printers

Color PrintKit 2.0*	Hewlett Packard Co.	06/26
FilmPrinter Plus	Mirus Corp.	02/27
JX-730	Sharp Electronics Corp.	06/26
LabelWriter	CoStar Corp.	01/16
LFR 1	Lasergraphics Inc.	02/27
Montage FR1	Presentation Technologies Inc.	02/27
P321SL	Toshiba America Information Systems Inc.	03/20
P3400PS*	Agfa Compugraphic	04/10
PLP II	GCC Technologies Inc.	02/20
PLP IIS*	GCC Technologies Inc.	07/31
ProColor	Agfa Matrix	02/27
QMS-PS 820 Turbo*	QMS Inc.	07/31
SlideWriter	Agfa Matrix	02/27
Smart Label Printer	Seiko Instruments U.S.A. Inc.	01/16
TekColor*	Tektronix Inc.	06/26
WriteImpact	GCC Technologies Inc.	03/20

Programming Aids

HyBase 1.2	Answer Software Corp.	02/20
HyperTMON	ICOM Simulations Inc.	01/09
HyperHIT 2.2	SoftStream International Inc.	02/20
HyperKRS*	KnowledgeSet Corp.	03/20
HyperSearch*	Discovery Systems	03/20
InterFACE*	Bright Star Technology Inc.	06/05
Plus 2.0*	Spinnaker Software Corp.	07/10
Prograph 1.2.1	TGS Systems Ltd.	03/13
Serius89 1.2	Serius Corp.	01/09

Reference Works & CD-ROMs

Guide to the Macintosh Family Hardware*	Addison-Wesley Publishing Co.	06/19
Microsoft Office	Microsoft Corp.	02/27

Scanners, Digitizers & OCR

Colorset 1.2	Studiotronics Inc.	02/06
JX-100	Sharp Electronics Corp.	02/06
MSF-300Z	Microtek Lab Inc.	02/06
OmniDraft*	Caere Corp.	03/20
OmniPage 2.1*	Caere Corp.	03/20
OmniProof*	Caere Corp.	03/20
OmniSpell*	Caere Corp.	06/19
TopScan	Calera Recognition Systems Inc.	06/12

Utilities

Adobe Type Reunion*	Adobe Systems Inc.	05/22
After Dark 1.1*	Berkeley Systems Inc.	03/27
AutoBack 1.31	Soft Trends	03/20
Backmatic 1.01	Magic Software Inc.	03/20
Boomerang 2.0	Zeta Soft	04/10
CatBack*	Master Manufacturing Inc.	04/03
Diamond	Sextant Corp.	07/10
DIRectory 4.0*	Seagull Engineering	03/27
DiskDoubler 2.02	Salient Software Inc.	07/10
DiskExpress II 2.04	ALSoft Inc.	06/19
DiskTools Plus	Electronic Arts	04/24
DiskTop 4.0	CE Software Inc.	04/24
FetchIt 2.01*	CRA Z Software	04/03
GOfer 2.0*	Microlytics Inc.	01/09
INITPicker 2.0*	Microseeds Publishing Inc.	06/12
KeyLock*	Probero Innovation AB	04/24
MacInUse 3.0	Softview Inc.	07/10
Marco Polo	Mainstay	07/10
Maxima 1.0.5	Connectix Corp.	07/10
Now Utilities	Now Software Inc.	06/12
On Cue 1.3	ICOM Simulations Inc.	04/24
On Location	ON Technology Inc.	06/05
Partner	Salient Software Inc.	02/13
PowerStation 2.5.2	Fifth Generation Systems Inc.	04/24
Pyro! 4.0	Fifth Generation Systems Inc.	03/27
Rival 1.1	Microseeds Publishing Inc.	07/10
SAM 2.02	Symantec Corp.	07/10
Screen Locker*	Now Software Inc.	04/24
Shadow 1.23	Natural Intelligence Inc.	03/20
ShortCut 1.01	Aladdin Systems Inc.	04/10
StuffIt 1.5.1	Aladdin Systems Inc.	07/10
Super Fontina*	Eastgate Systems Inc.	06/12
Tempo II+ Tools	Affinity Microsystems Ltd.	07/31
Virtual 2.0.2	Connectix Corp.	07/10

Word Processing

Coach Professional 3.1*	Deneba Software Inc.	01/23
Correct Grammar	Lifetree Software Inc.	06/12
Grammatik Mac	Reference Software International	06/12
Inside Information	Microlytics Inc.	07/10
Letter Writer Plus*	Power Up Software Corp.	04/10
MacProof 3.2.1	Lexpertise USA Inc.	06/12
MacWrite II 1.1*	Claris Corp.	01/16
RightWriter 3.10	RightSoft Inc.	06/12
Sensible Grammar	Sensible Software Inc.	06/12
WriteNow 2.2*	T/Maker Co.	05/22

Ehman 5th Anniversary

CELEBRATION

The Best Deal Ever, On Our Best Drive Ever.

In an industry where companies sometimes seem to come and go like moon tides, a five year anniversary is cause for celebration. Ehman is marking the occasion with a limited time offer on its new "E" series 60MB external hard drive. Between now and the end of summer, you can purchase this drive at an unprecedented low price of just $399 including all cables and software.

Just about everything has been improved in our "E" series including a totally redesigned, easy to follow manual and a quieter fan that reduces previous noise levels by 25%. Perhaps most important we've incorporated new formatting software that will ensure optimal drive performance and speed. Extra touches also include double power outlets, new 50-pin cable connectors, dual fuse circuitry, and an easy access fuse latch.

But perhaps the best reason to buy an Ehman peripheral is the assurance you get from working with one of the largest pioneers in the Macintosh business. We stand behind all of our products with a 30-day money-back guarantee and a 2-year limited warranty. That's something we've been doing much longer than just about anyone else in the business. And that's a cause for celebration.

Call your Ehman representative today, and join in on the celebration and the savings.

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80Q	*$599*	*$649*
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135	*$749*	*$799*
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THE NAKED TRUTH

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An Advertisement Sponsored by Cleary & Kvamme, Inc. Because "Distracted" Minds Need to Know ...More or Less.

CAERE's Global Village

Cleary & Kvamme had an exciting challenge recently when one of our favorite clients (Caere®) came to us with an *unusual* request – that is when you consider that we're only a small marketing communications shop in the heart of "Sillycone Valley." Caere wanted us to assist them with the worldwide launch of the *Typist*,™ their powerful new hand-held personal scanner. You want it when? Why not? After all we do have great technology and quick turnaround. So in four short weeks we managed to pull together ads, packaging, brochures and POP – all in several languages that we could barely recognize, much less translate. As you can see in this edition of MacWeek (see Caere's *Typist* ad, inside cover), we took some creative liberties and inserted German – as an interesting way of drawing attention to the ad. We sure hope that the folks in Sweden have a firm grasp of Serbo-Croatian. We know that the packaging will work anyway – the visuals are designed to tell the complete story.

SOFTVIEW's if:X ...More than forms

Softview recently announced (in this edition of MacWeek) if:X™ Forms Designer, an exciting new product that allows you to create forms, charts, schedules – even menus if you're so inclined. What's different about Forms Designer is what Softview calls *Graphics Intelligence*™ (By the way we wanted to call it *Farfignugen*). It's a great product, and we are currently using it in our shop to do all kinds of things – media charts, tables and forms – which we once hated to do. Great news... and congratulations to Softview on this, as well as the many other recently announced products.

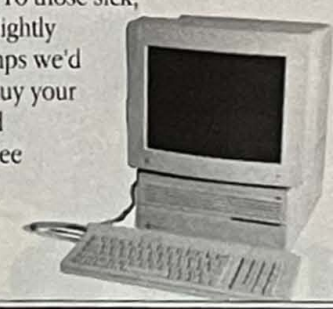
Forms Designer

Thanks Apple®...seriously

As a small marketing communications firm starting out just four years ago, you gave us the chance of a lifetime. For that we are truly grateful and wish to acknowledge you, and some of our other customers – and what better timing than in the Macworld edition of MacWeek.

Without your incredibly great technology, our company would have never grown so fast and in such a short period of time. But equally important: You unleashed the creative energy of some of the most innovative software and peripheral manufacturers in the industry. Each with its own brand of magic.

Companies like Caere, Softview, Meridian Data and MacroMind – who have all delivered innovative software and hardware solutions – new ways of doing ads, brochures, packaging, logos, forms, animated videos & multimedia presentations – which happens to be our stock and trade. In fact, we managed to pull this entire ad together in less than 2 hours with the help of Macintosh-based technology. Then again, there are some out there who might say, "Well it looks like you guys did it in 20 minutes." To those sick, cynical and slightly impaired wimps we'd like to say: Buy your own damn ad space...and see if you can do any better!



Personals

For Sale: One "Knowledge Navigator" like new. Has a real nifty interface. Kind of a little guy who knows alot about rain forests. He's real smart! Write Box 2245.

Single Male Programmer wants to hear again from exotic French woman named Pascale. We met at the CD ROM Conference. I want to share some new code with you. Write Tom D Shrimp at Box 3488.

You are an innovative engineer with a brilliant idea that you want to burn into the ROM of the world. I am a Wharton MBA (ink still not dry) with a need to run my big spreadsheet right up and down your startup. Let's get serious! Write Geoff Watley-Smythe III at Box 1099, Mi-Assets.

Free photos of "naked" Nintendo® game programmers – some of the sexiest men in the industry – inventing new games in the "buff." Send us your SASE and $500 to cover the cost of shipping and handling. Write Box 5560 for details.

Meridian: Masters of the CD ROM Universe.

C & K (that's us again) recently announced that they have just been retained by Meridian Data, Inc. of Scotts Valley, California, to handle all advertising and collateral support (OK, brochures). Meridian has captured a sizable share of the CD ROM publishing market (65%); establishing a leadership position in what could well become one of the fastest growing market segments of the 90s. Their first ad appeared in MacWeek last week – unfortunately they did not want to be in the same edition as C & K. Meridian has exciting plans in store for the Macintosh market – plans that will help stop the reckless use of paper and the depletion of the Amazon Rain Forest – a problem first noted by that little guy in the Apple *Knowledge Navigator*™ video.

Separated at Birth

C & K Partner Mark Kvamme and Edvard Munch's character from *The Scream*. We are now convinced that Mark is well suited to manage a creative business.

Beyond "Talking Heads"

Don't you hate it when you see one of those sickening industrial strength videos with the two guys just sitting there, saying dumb things to each other? "Hey Bob, what's really great about 'Jettison Technologies' is our commitment to our customers – those brave guys who fly for the Navy."

At C & K we have a solution to your tired videos (nice transition, huh?). With a little help from MacroMind® Director II, we can animate your brochures, put *sizzle* into your most critical presentations – and all for a price that you can afford – that's if you're properly funded by a recognizable venture capital firm. So if you're really serious – we have done some great work for clients such as Levolor,® Revo,® Caere Corporation and Hix Rubinstein (real estate guys). To get the scoop, give us a call at (408) 378-2444. Ask for Bill Cleary.

Logos R Us

C & K President Bill Cleary (also known as "Buster") has finally made the "big move" by opening up our first foreign office in Eastern Europe – somewhere in Poland. After nearly twenty minutes of *strategic planning*, Bill went ahead and did it anyway – against the advice of our banker, financial planner and Bill's own fitness coordinator. According to Cleary: *"The time is right to move in and improve the look in those graphicless commie countries. Imagine an entire block of nations with only one logo – and a very boring one at that. They need solid corporate identities – now – forget about creating an economic infrastructure. How can you sell anything without brand recognition?"*

Bill will be away in early September, working on a plan to market Cellular Phonys and authentic Navajo jewelry to those people who are waiting in line at fast food burger joints in Moscow. According to Cleary: *"This is a completely new marketing paradigm, changing the ground rules for how junk food is marketed in Eastern Europe, not to mention the Third and Fourth Worlds."*

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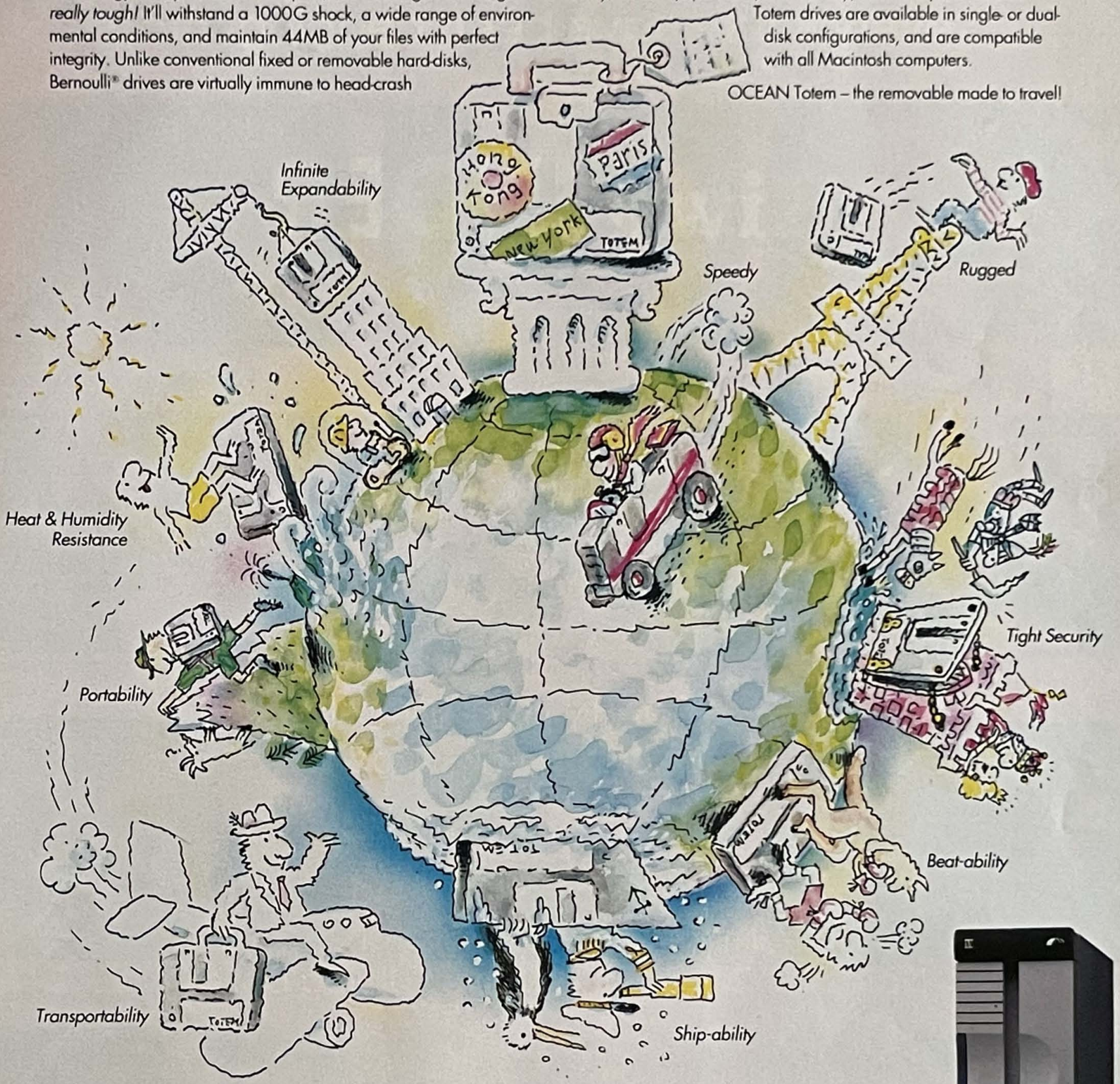

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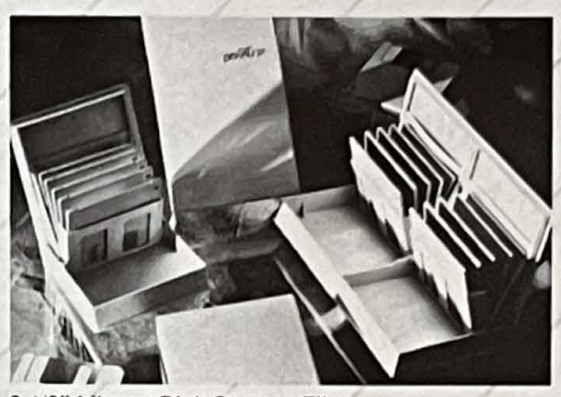

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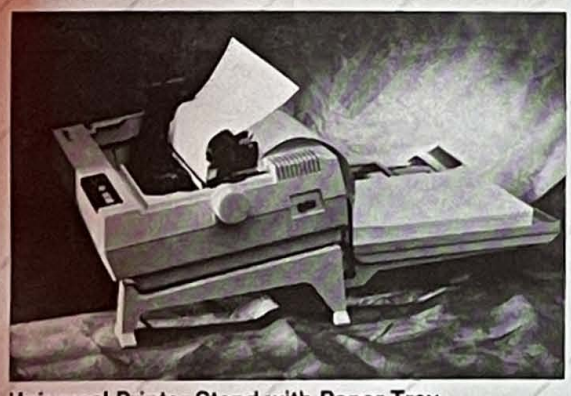

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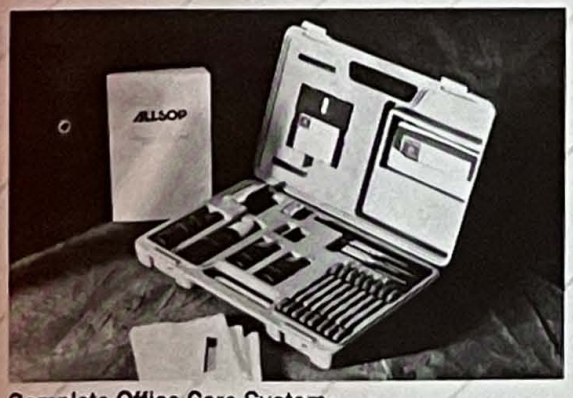

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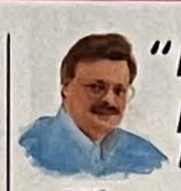

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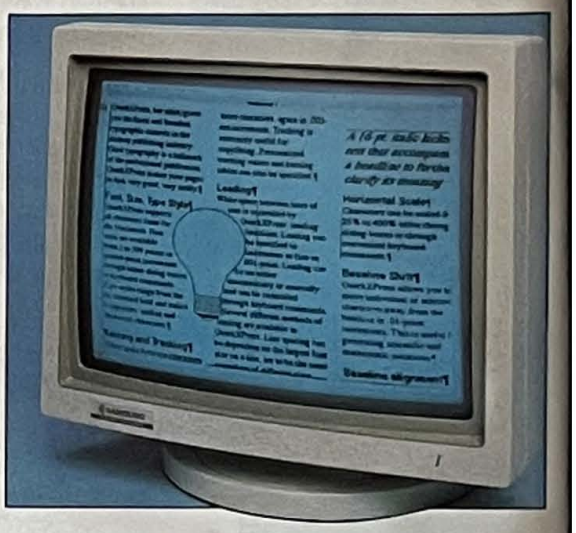

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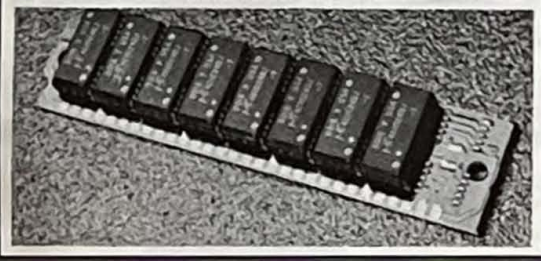

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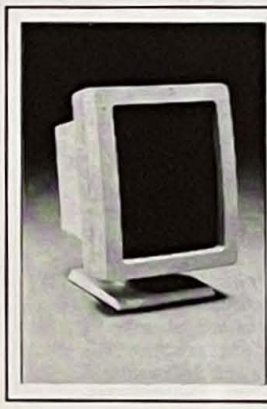

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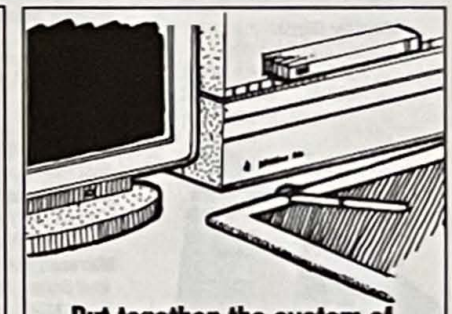

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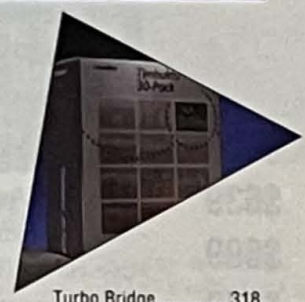

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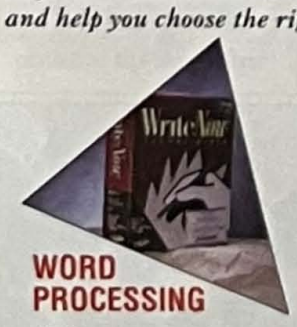

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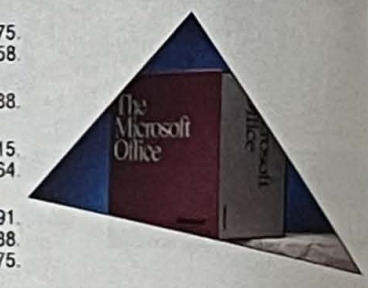

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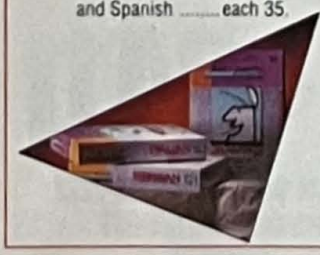

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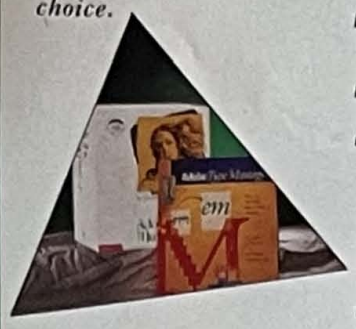

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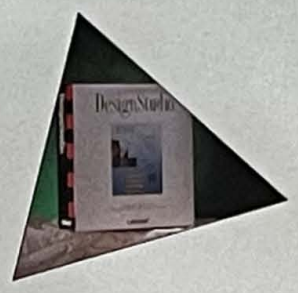

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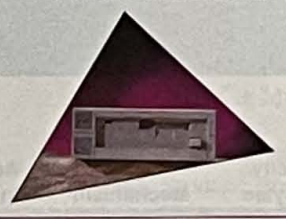

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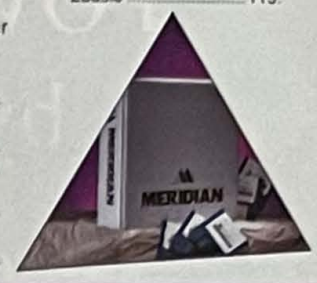

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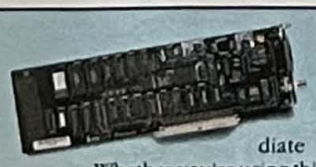

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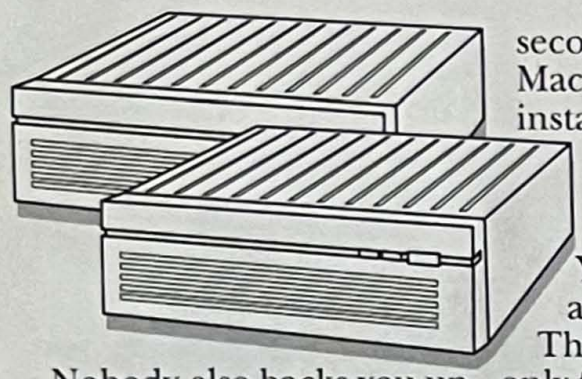

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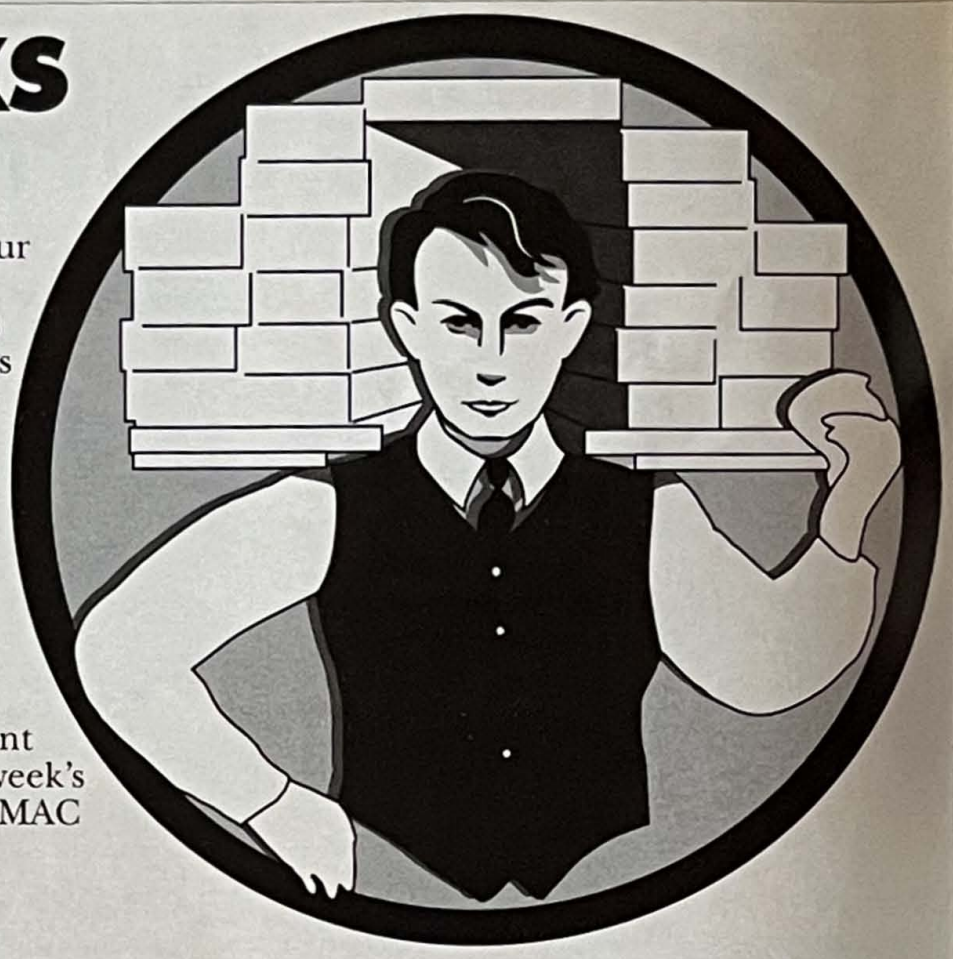

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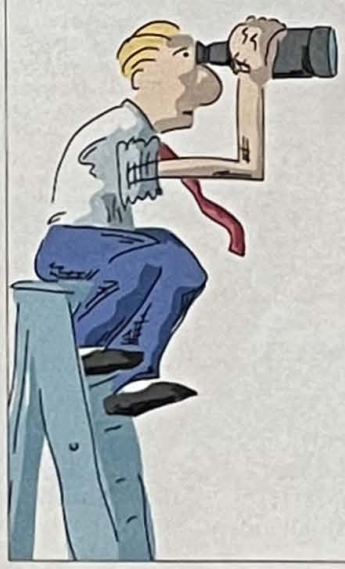

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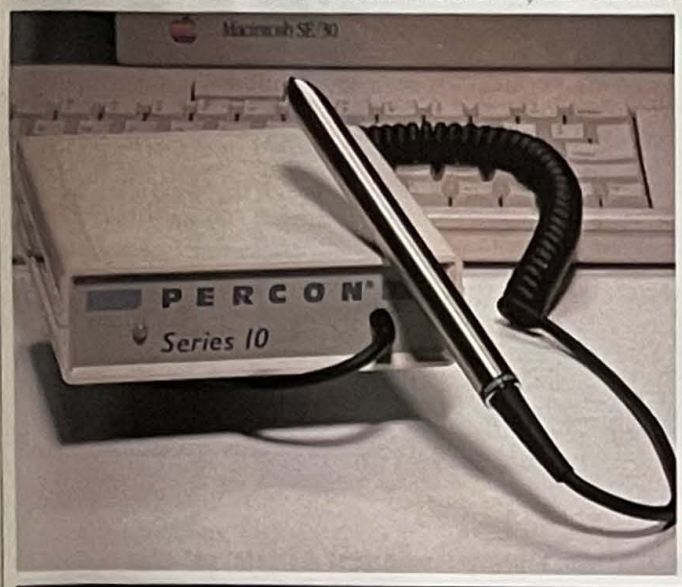

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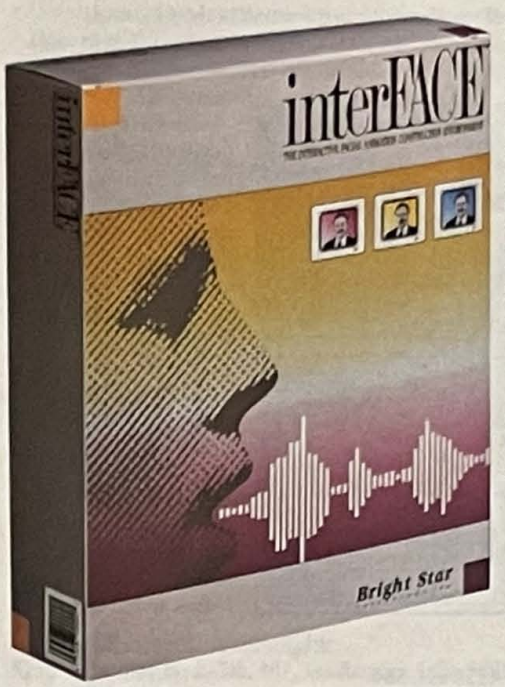

A must for every Macintosh software library! The new random-access animation program that adds the power of a talking person to desktop presentations, information kiosks, training programs, or any application that needs a friendlier user interface. Adds animation power to: Director 2.0, Wingz, HyperCard, SuperCard, 4th Dimension, C, Pascal, FoxBase II, MicroPhone II, authorware and other applications that support XCMDs. *Plus, interFACE is easy to use for general animation too, it imports color into HyperCard, and is fun.*

- 11-Mbyte of software
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Also available, Passage F for the Macintosh Plus, SE — $200.

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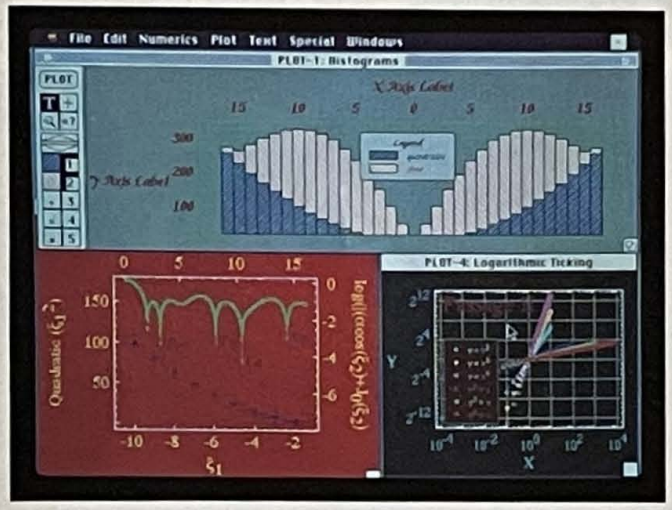
For brochures and orders call or write Passage Software.



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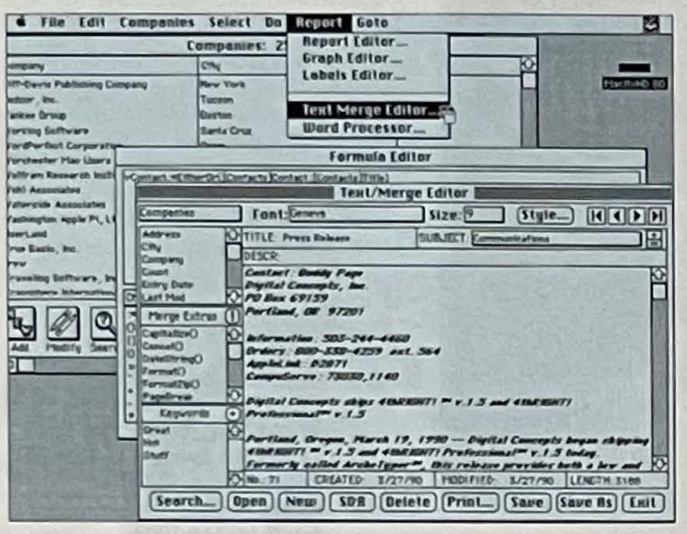

4thRIGHT! is a developer's workshop providing user interface tools, the application shell, and a robust development library for creating Macintosh applications using 4th Dimension.

4thRIGHT! retails for $145. 4thRIGHT! Professional retails for $325 and adds an integrated word processor, a large (150 plus and growing) library of external procedures, and distribution rights. Demo available!

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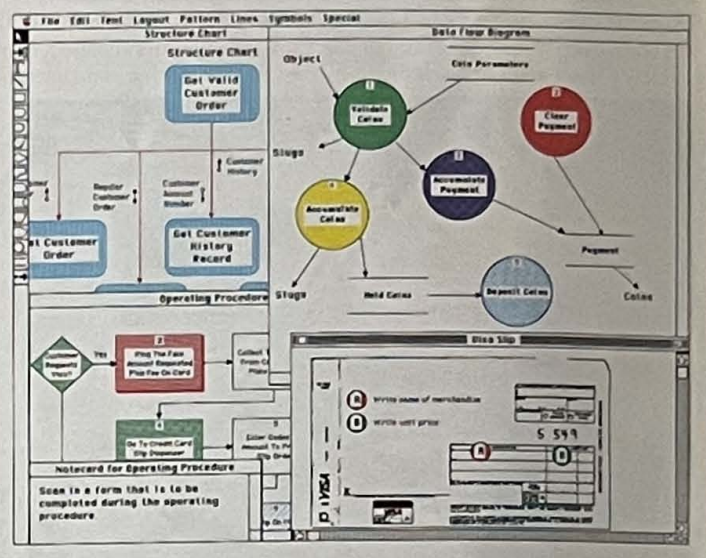

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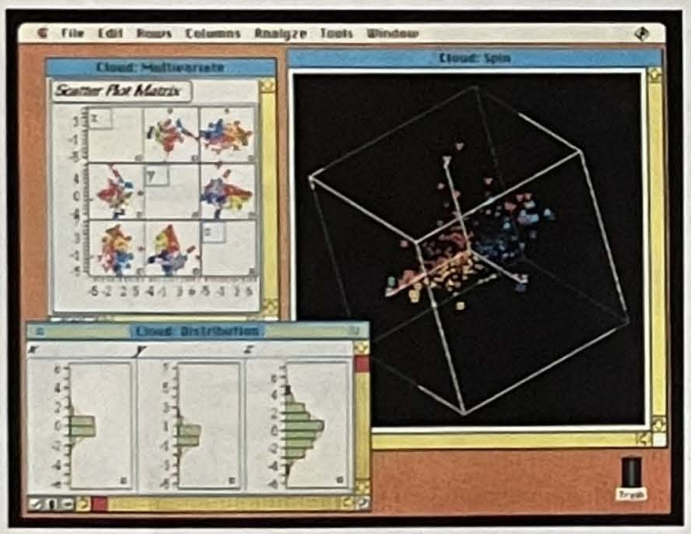

Classical statistics are organized in six logical areas: Distribution of Y's, Fit Y by X, Fit Y by X's, Specify model, Spin and Y's by Y's. Each area comes complete with appropriate graphics: leverage plots, means comparison circles, spinning plots, and more.

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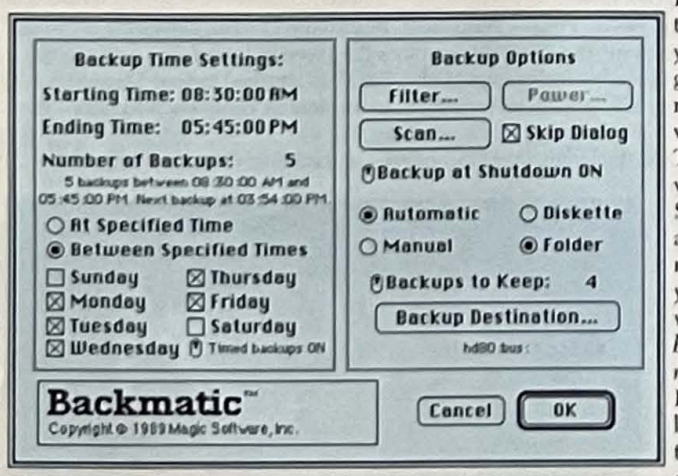

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With auto or manual password protection, random display mode, programmer's instructions and SystemIQ task management.
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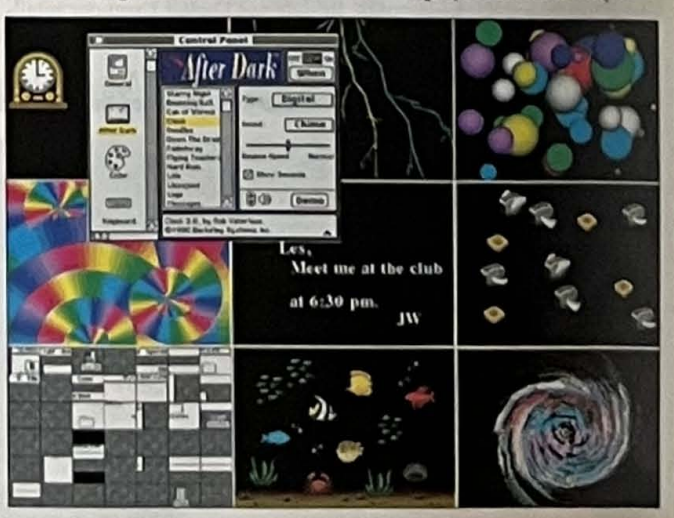

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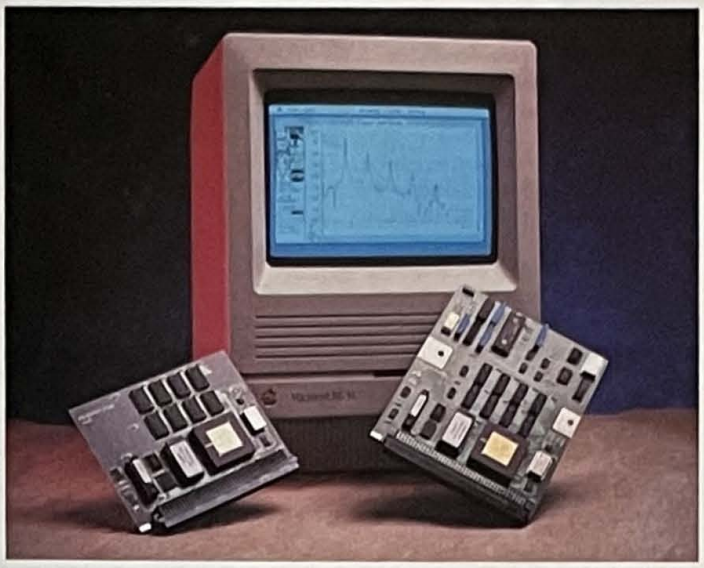
Floating-point DSP card with built-in analog I/O makes the SE/30 a portable instrument! With a 50 MHz digital signal processor that can handle a 1024-point FFT in less than two msec, MacDSP is fast enough for real-time applications. Ready-to-use signal analysis software requires no programming! And for programmers, over 150 functions for DSP, Math, and analog I/O are callable from C, Pascal, BASIC, and Fortran. Prices start at $2,695. Call or write for a free demo disk.



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Then you need S.T.A.T.

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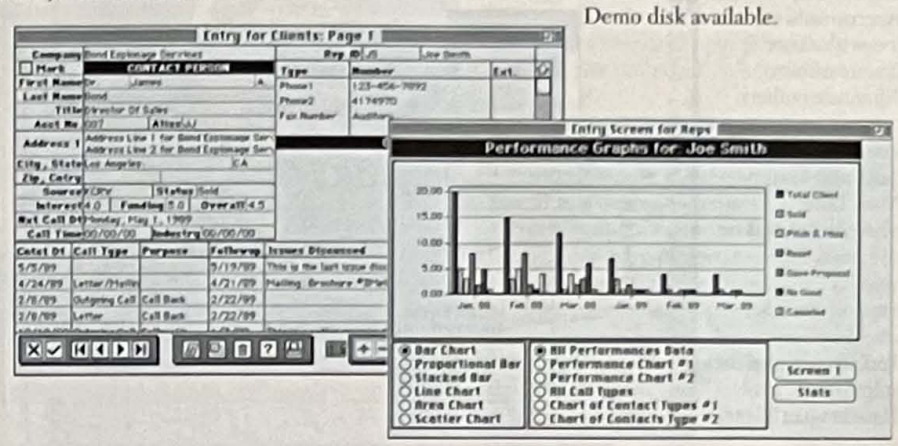

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NewLife 1 comes with 8 SIMM sockets and SCSI port
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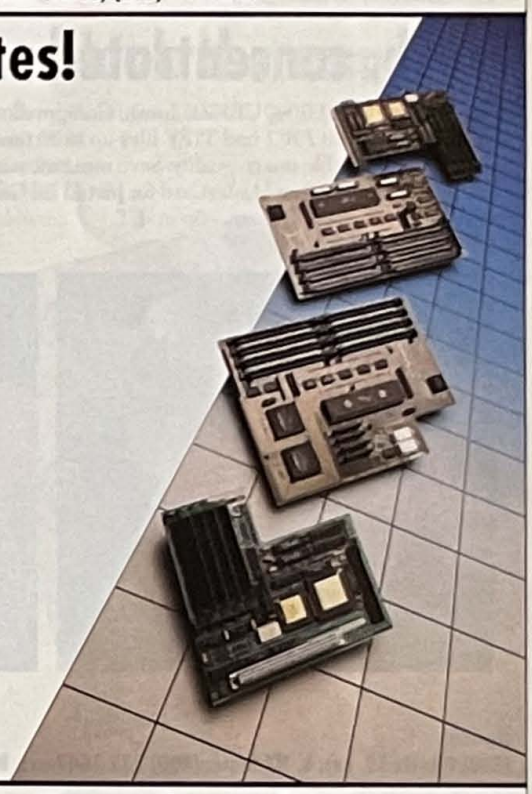

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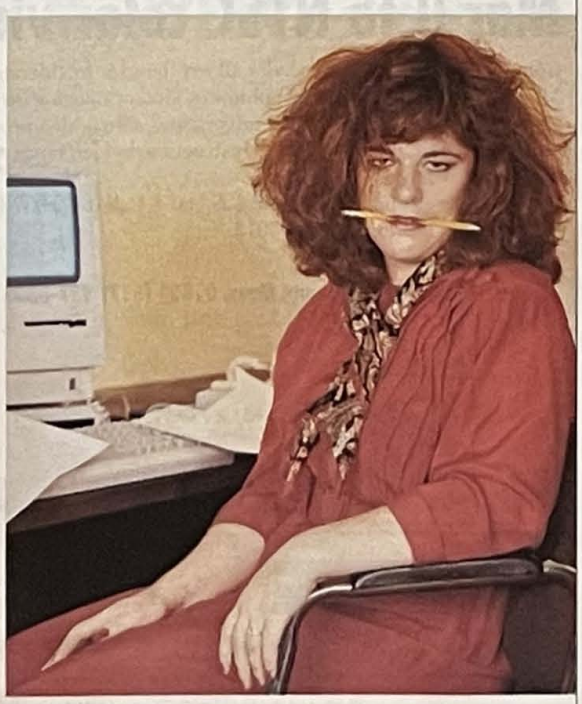

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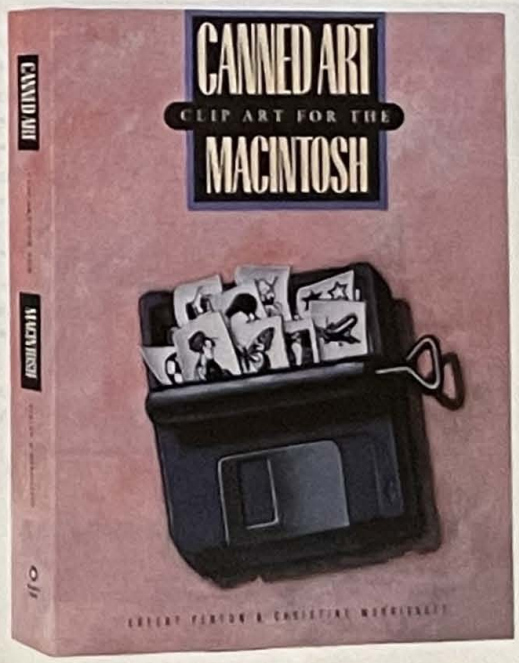

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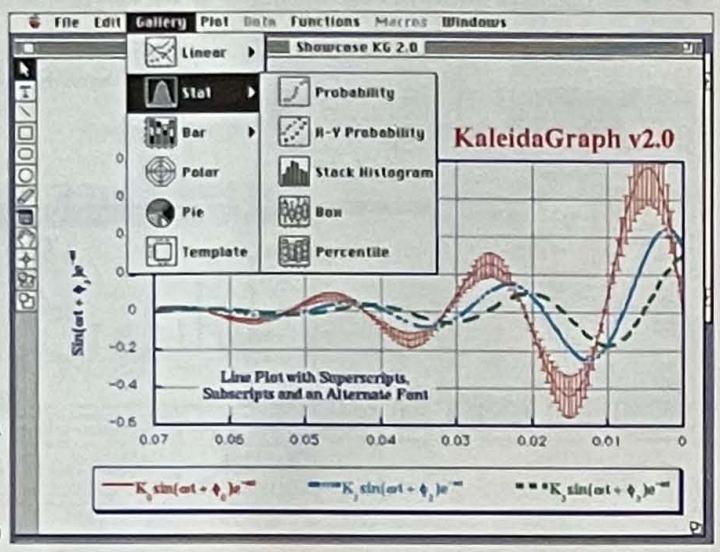

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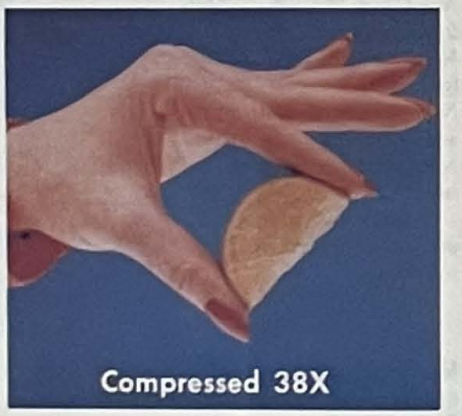

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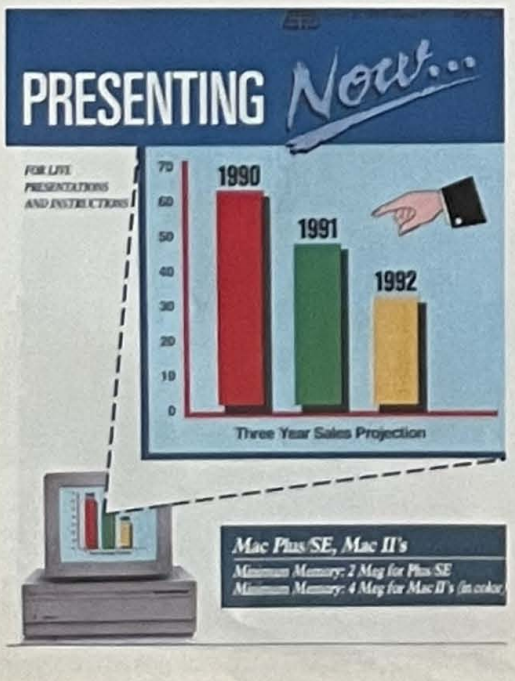

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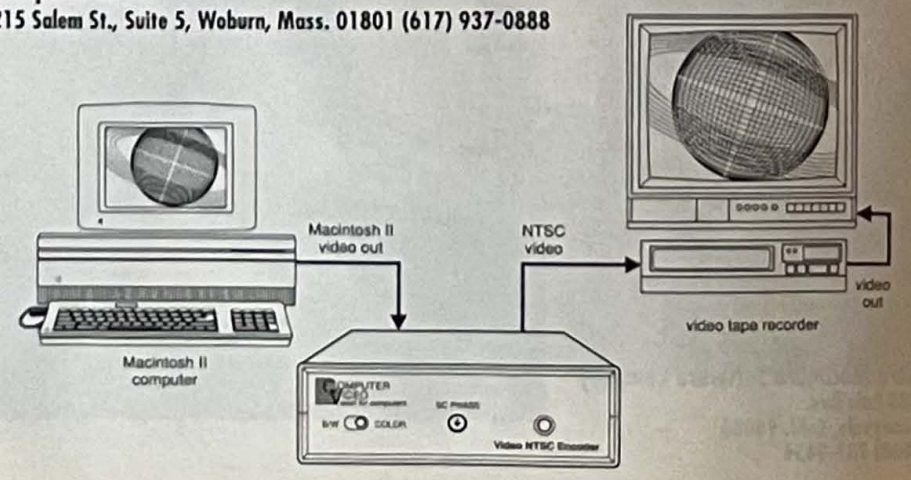
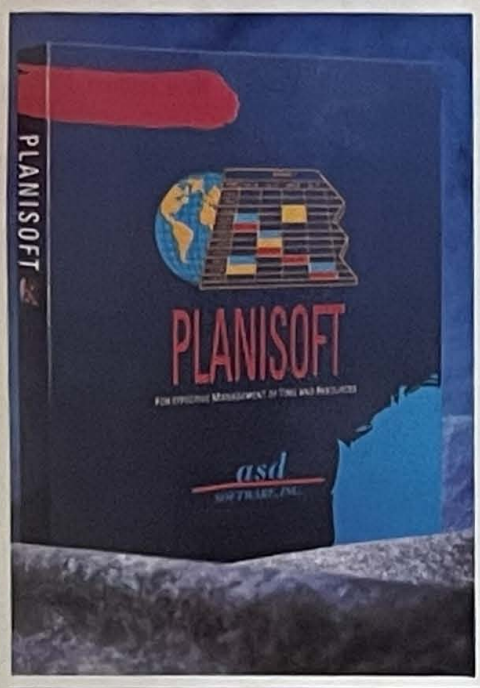


Time and resource management



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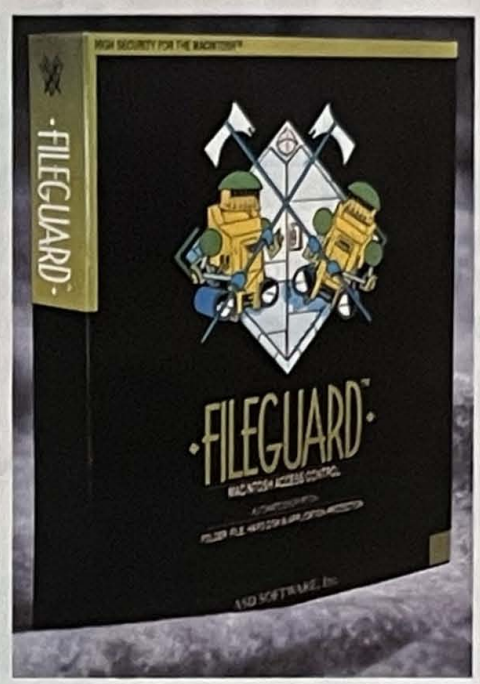
Protect folders with FileGuard



FileGuard 2.5, rated number one by MacWEEK (Oct. 24, 1989) and MacUser (May, 1990), offers powerful folder protection and much more. FileGuard folder protection allows a user to set access privileges to specific folders, including the system folder, limit access to folders on a per user or per group basis and create "write-protected" folders or "drop folders".

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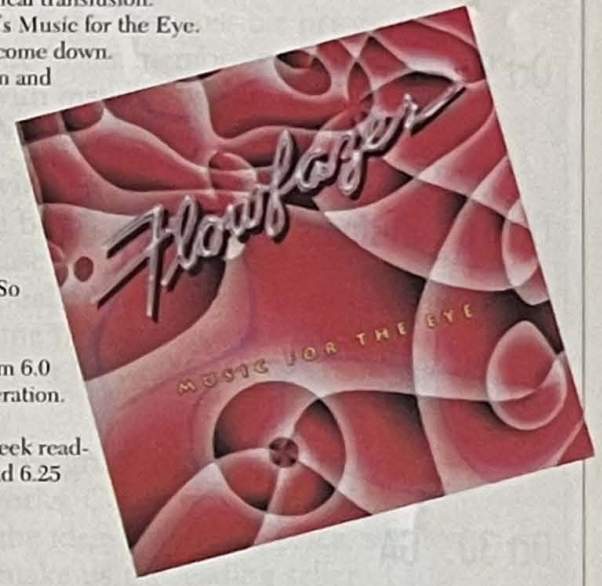

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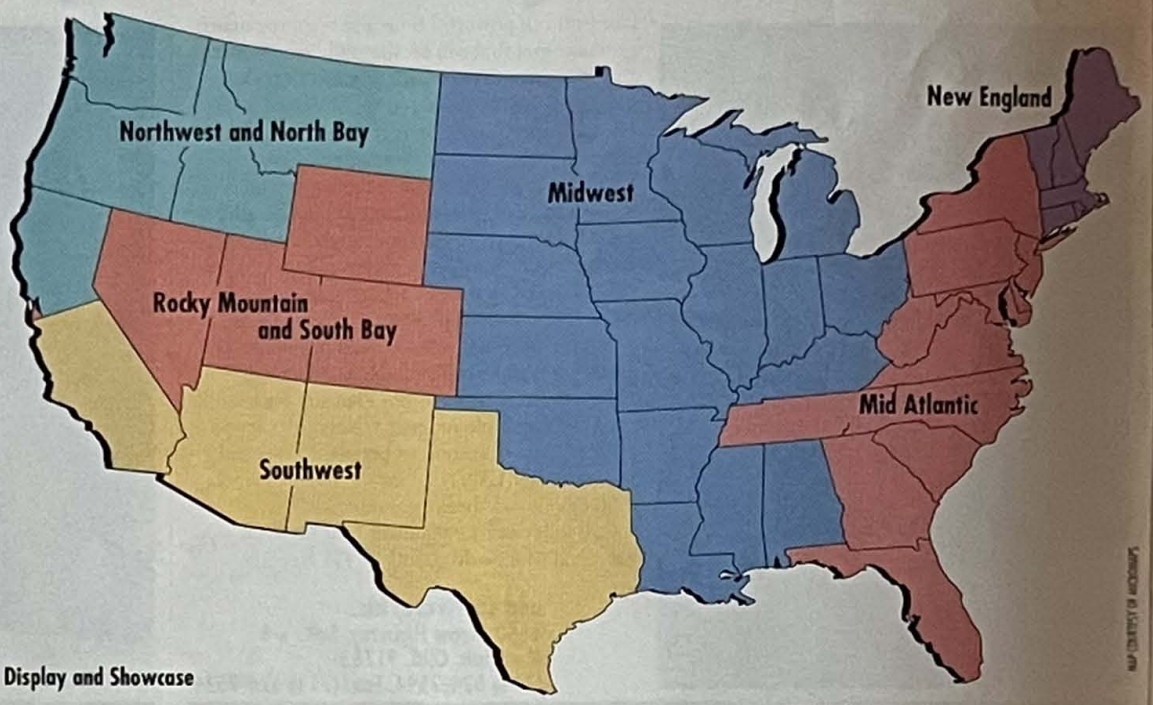

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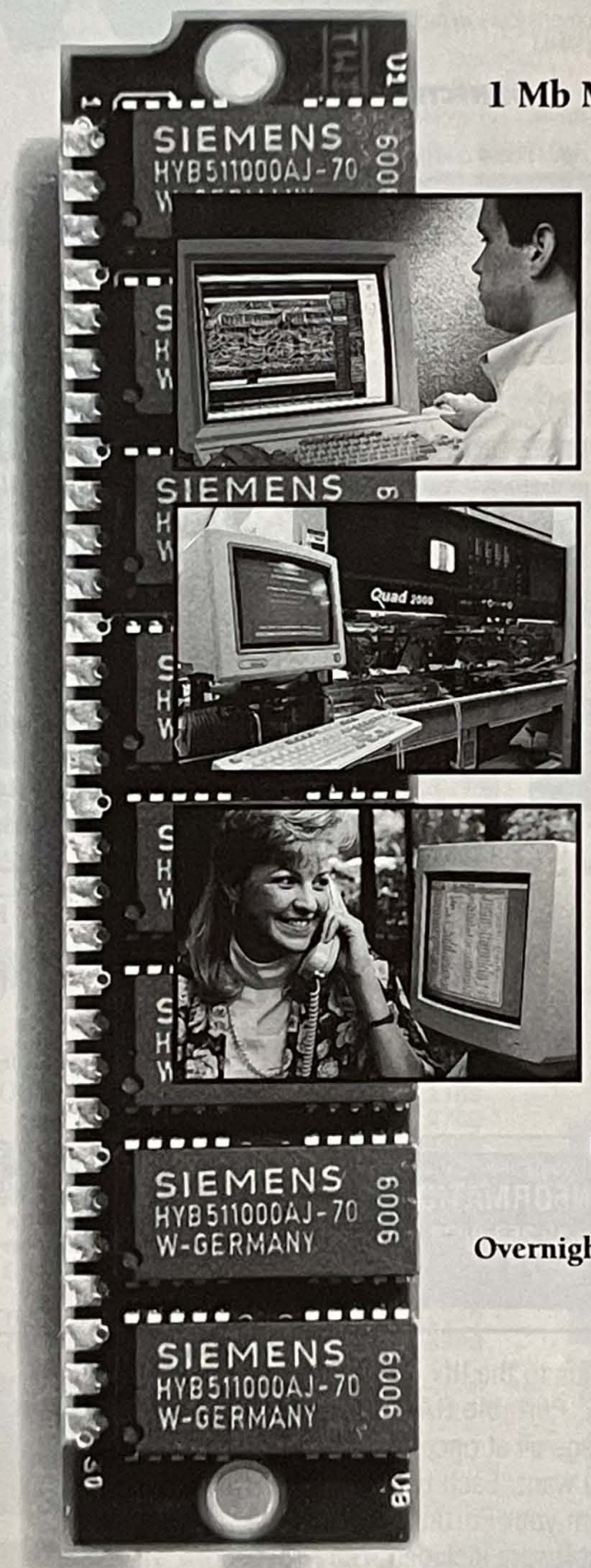

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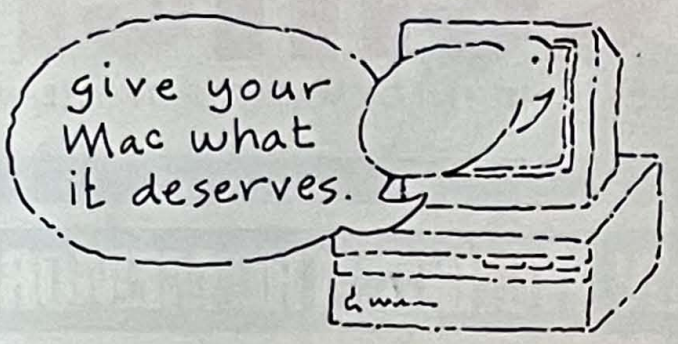

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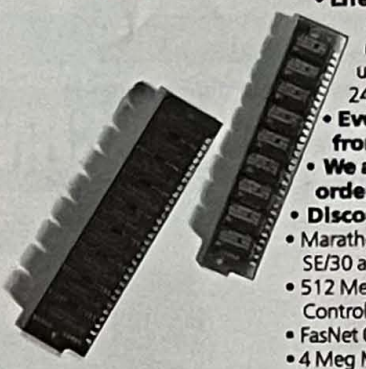

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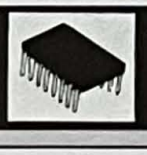

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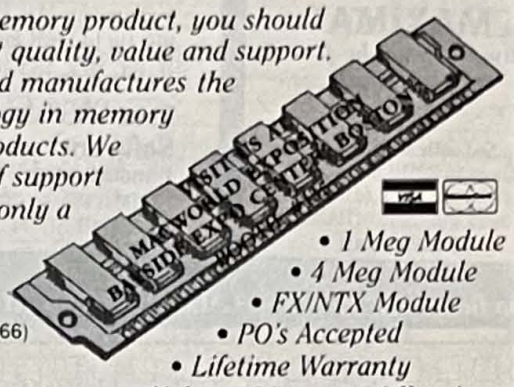

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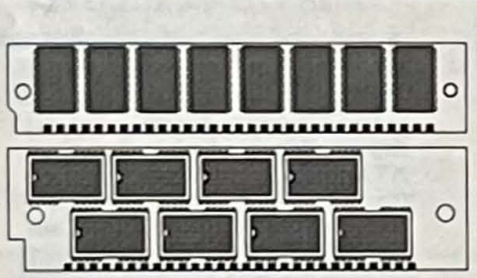

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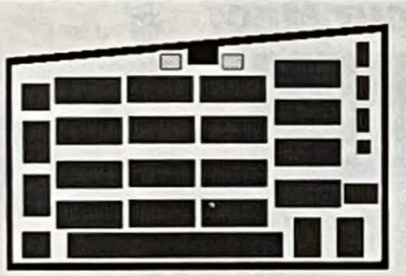

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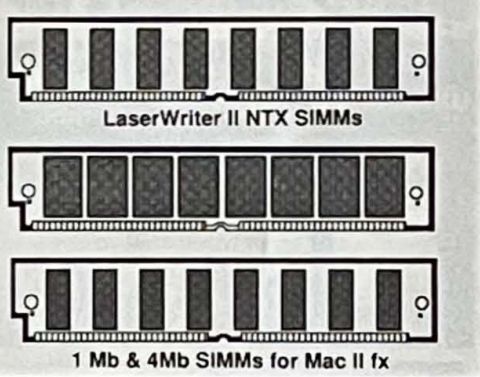

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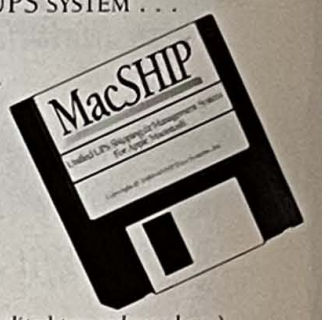

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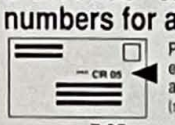

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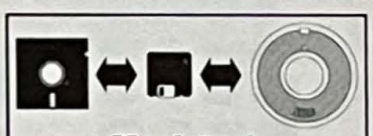

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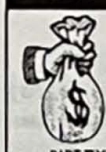

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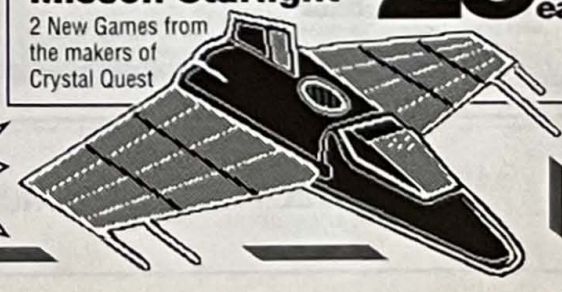

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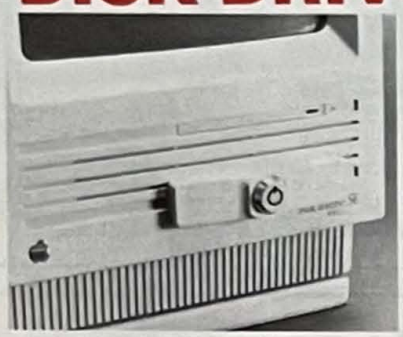

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continues on the next four pages.

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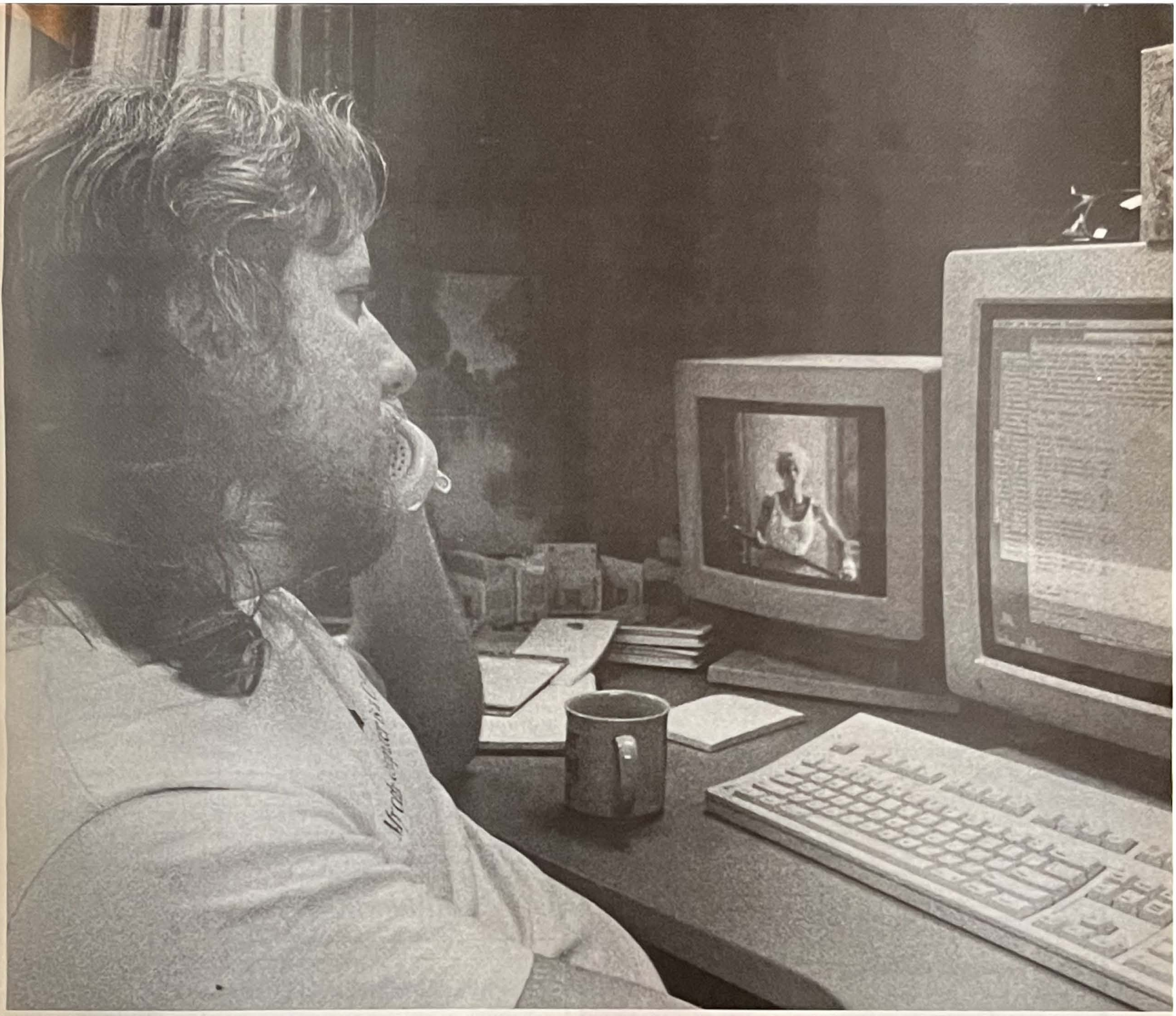

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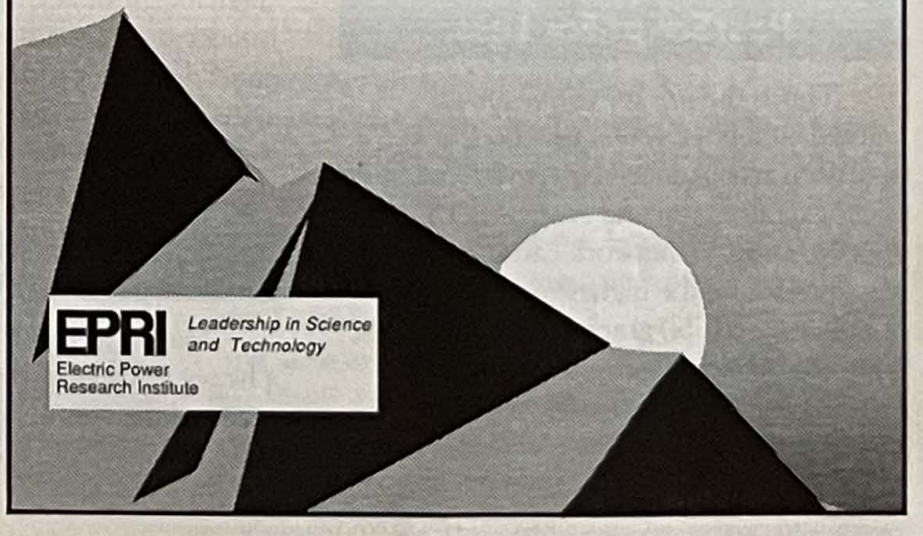

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01108B

Employee survey: Lack of confidence in Apple managers

By MacWEEK staff

Cupertino, Calif. — In a letter to employees last month, Apple CEO John Sculley expressed concern over the results of a companywide survey taken earlier this summer.

More than 8,000 employees filled out the confidential Apple90 survey on a variety of issues. For Sculley, the most troubling results included poor ratings on management and responsiveness to customers' needs.

According to Sculley, the surveys, which were tabulated by Towers and Perrin, an independent survey and research firm, showed consistent responses throughout the company. Such consistency is unusual among other companies that Towers Perrin has surveyed, where higher management typically views business issues in a better light than lower-level employees.

See Survey, Page 189

Apple90 survey

The Apple90 employee survey revealed that a large proportion of employees believe that upper management:

- **Lacks sincere interest in employee well-being.**
- **Is not responsive to certain customer needs.**
- **Is unaware of the challenges employees face.**
- **Has not set a clear business direction for Apple.**
- **Does not make decisions at the appropriate level.**

The Mac may not be the dominant machine on Microsoft's corporate campus, but the company clearly intends to keep the lion's share of the Mac application market.

Microsoft no threat to Apple; Mac apps highly profitable

By Daniel Farber

Redmond, Wash. — If you stroll through Microsoft Place, you might think you were on the campus of the University of Washington in Seattle, across Lake Washington, rather than at the headquarters of the world's largest microcomputer software company.

Young, T-shirted programmers and suntanned marketing strategists hang out on the campus grounds, which include ponds, volleyball courts, a baseball diamond and cafeterias that specialize in different cuisines.

Microsoft CEO and founder Bill Gates operates his empire out of an office in one of the low-slung buildings scattered across the 200-acre site.

And while some people believe that Gates and company are plotting the destruction of Apple as an industry force, Gates is quick to point out that Microsoft has supported the Macintosh since its introduction and makes a bundle of money from selling its Macintosh applications.

See Microsoft, Page 190

Microsoft seeking bigger LAN share

Microsoft Corp. is trying to wrest a portion of the LAN market from Novell Inc., its smaller but successful rival, the old-fashioned way — with lots of money.

Microsoft officials briefed industry analysts last week about its plan to spend $16 million over the next year to bolster sales of its LAN Manager. In addition, $5 million will be spent buying technologies that extend OS/2 LAN Manager into other environments, including Macintosh, the company said.

Provo, Utah-based Novell holds an estimated 60 percent of the total personal computer networking market. Microsoft hopes to make LAN Manager, after two years on the market, a more serious competitor for Novell's NetWare — which has its own NetWare for Macintosh — by bundling Macintosh networking into the core LAN Manager product rather than relying on OEMs to provide it separately.

Although Microsoft has not announced which company will supply a Mac server, industry insiders say that 3Com Corp. of Santa Clara, Calif., is the sure bet with its LAN Manager-based 3+Open for Macintosh.

— By Margie Wylie

Technology companies report generally higher revenues

By Rochelle Garner

San Francisco — Although technology companies were blamed for last month's downturn on Wall Street, most of the companies looked at by MacWEEK reported higher revenues and income for their recently ended quarters.

▸ **Adobe Systems Inc.** recorded higher revenues for the second quarter ending June 1. The company's revenues rose 26 percent from $28.09 million in the same period last year to reach $35.35 million this year. Net income for the quarter was $7.88 million, compared with $7.58 million in the quarter a year ago.

▸ **Aldus Corp.** posted record revenues and earnings for the second quarter ended June 29. Revenues increased 37 percent to $33.3 million, compared with $24.3 million in the same period last year. Net income for the quarter was $5.8 million, compared with $4 million in the same period last year.

▸ **Conner Peripherals Inc.** posted record sales and net income for the second quarter ending June 30. Sales increased more than 85 percent from the same period last year to $303.8 million. Net income rose to $26.6 million, an increase of more than 182 percent from the same period a year ago.

▸ **Digital Equipment Corp.** posted the first quarterly loss in its history for its fiscal 1990 fourth quarter ending June 30. For the quarter, DEC reported a net loss of $256.73 million, compared with a $313.22 million profit a year ago. For the year, DEC reported a net

See Earnings, Page 190

Business BRIEFS

Apple settles securities violation suit

San Francisco — Still paying the price for costly dynamic RAMs it bought during the 1988 chip shortage, Apple last month agreed to a settlement with shareholders who sued it for securities violations.

On Jan. 17, 1989, Apple painted a relatively rosy picture of its expected second-quarter earnings. Only 10 days later, it said earnings would fall short of predictions because of the expensive DRAMs. The announcement triggered a trading frenzy, with Apple's stock plunging 10 percent in one day. Several shareholders sued Apple and CEO John Sculley, claiming they were induced to purchase Apple stock at artificially high prices.

Without admitting wrongdoing, Apple and Sculley have agreed to pay $5.65 million to shareholders who purchased Apple stock between Jan. 17 and Jan. 27, 1989.

In court papers, Apple and the shareholders said they agreed to the settlement — which now must be approved by a judge — to avoid the time and expense of litigation.

Jasmine Technologies resurfaces from Chapter 11

San Francisco — Jasmine Technologies Inc. rose out of Chapter 11 last month when a judge for the U.S. Bankruptcy Court for the Northern District of California approved its plan for purchase by, and reorganization under, Chess SA.

Chess, a Paris-based holding company, plans to revitalize Jasmine by increasing European export sales to 50 percent of its total revenues within two years. Under the reorganization plan, consumer creditors who purchased products that were not delivered will be reimbursed over a five-year period. Other creditors will receive Jasmine preferred stock.

A key point in court negotiation was the resolution of lawsuits between Rodime Systems Inc. and Jasmine. The two companies had decided to end a bitter dispute alleging breach of contract, fraud, conspiracy and other charges (see MacWEEK, May 8). Under terms of the settlement, Rodime agreed to take back its remaining Jasmine-labeled drives and repair them at Jasmine's expense.

Jackson steps down as Silicon Beach general manager

Seattle — Seven months after selling the company he founded to Aldus Corp. (see MacWEEK, Jan. 23), Charlie Jackson has stepped down as acting general manager of Silicon Beach Software. Jackson will serve as consultant to the 5-year-old San Diego-based company, now an Aldus subsidiary, for six months. After that, he will pursue his interests in sponsoring amateur athletics programs, according to Aldus.

Aldus last week announced that Stephen Cullen will serve as vice president and general manager of Silicon Beach. Cullen comes from a six-year stint with Mountain View, Calif.-based Software Publishing Corp., where he served most recently as a business unit manager.

Apple to test brochures in national papers

Boston — USA Today readers here and in other major cities will find out more about the Macintosh when they open their papers Wednesday, thanks to a new experimental Apple advertising campaign.

Coinciding with this week's Macworld Expo, Apple will distribute 525,000 of its "Apple Advantage" brochures in newspapers in San Francisco, Dallas, Chicago, Boston, Los Angeles and New York.

The brochure was designed to provide a "friendly yet comprehensive look at Macintosh technology," Apple said. It covers "power, applications, networking and growth."

It already has been distributed in PC Week magazine to attract the attention of MS-DOS users and in selected regional editions of The Wall Street Journal.

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01108C

Hell, Optronics in patent dispute

By Pamela Pfiffner

Kiel, West Germany — Dr.-Ing Rudolf Hell GmbH, parent company of Melville, N.Y.-based Hell Graphic Systems Inc., filed a lawsuit in late June charging Optronics with violating its patent for color halftone screening technology.

Optronics, a Chelmsford, Mass.-based division of Intergraph Corp., said the suit is without merit and that Hell's patent is not valid. Optronics filed a countersuit on July 19, according to spokeswoman Arlene Karsh.

At stake is a key technology for imagesetter vendors looking to rid color output of moiré patterns, the irregular distribution of screen dots that is the most common complaint about digital color separations.

Hell's jealously guarded patent concerns the algorithms used for digital color separations on high-end imagesetters. These algorithms prevent moiré patterns through accurate angle alignment and screen frequency.

Optronics, like Adobe Systems Inc., has developed its own screen angle algorithms for PostScript color imagesetters. Both companies have patents pending. Adobe has stated that its technology does not infringe on Hell's patent.

Optronics' rational screening technology, called Intellidot, is used in its ColorSetter high-resolution imagesetter. "Our approach to generating halftone dots is fundamentally different from that outlined in Hell's patent," Karsh said. Optronics also is developing a new algorithm, called an irrational screening technology, that more closely replicates traditional, high-resolution line screening, Karsh said.

In its countersuit, Optronics also is charging Hell with unfair business practice. Optronics claimed that Hell told its customers about the alleged patent infringement in an attempt to take away business.

In a prepared statement, Optronics General Manager Bruce Harrison said, "We take objection to the continuing public smear campaign by Hell, which is an undisguised attempt to unfairly monopolize the typesetting and imagesetting markets both in Europe and the United States."

In May, Rudolf Hell GmbH announced plans to merge with Linotype GmbH. Linotype, the world's largest PostScript imagesetter vendor, has not incorporated new algorithms into its devices, although the Lino-Hell union could change that.

Harrison said Optronics was considering anti-trust action "aimed at restraining the newly combined Linotype-Hell conglomerate from destroying fair competition in the world imagesetting market."

Hell declined to comment while litigation is in progress. □

Survey

From Page 187

Some of the responses were positive. Employees, for example, said they view Apple's vision of empowering individuals as important to the company's success. They also are proud to work at Apple, hold favorable opinions on Apple's pay and benefits, and trust information from Apple. Nearly all employees give the company's products high ratings for quality.

On the down side, many employees said they lack confidence in the company. Half said they are less satisfied today than they were a year ago. Only half said Apple is meeting the needs of individual and government users; less than half think educational users are satisfied.

Employees also were critical of management in the survey. More than 50 percent said they do not believe that executive management is sincerely interested in their well-being. Less than half of those surveyed think management is aware of the challenges employees face. More than half of responding employees think Apple lacks a clear business direction.

"Your concerns are real," Sculley said, promising to continue a series of Executive Strategy Forums for senior management and hold a worldwide managers meeting in September. "This is an important issue that we must resolve if we are to become One Apple."

Sculley ended his letter with an appeal for patience. Detailed results broken down by division, region and other criteria will be presented at meetings in September, he said, after the summer vacation months have passed and presentations can be prepared. "Since the Apple90 survey was conducted worldwide, we feel we must share the results in a global manner."

He said: "As you probably noticed, I have not addressed all of the issues indicated by the results I have reported. That is not because I've chosen to ignore them, but because time is needed to consider how we will deal with them. To thrive in the '90s, we must once again be One Apple, and Apple90 is a great start." □

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Microsoft

From page 187

"We made our commitment to the Macintosh at the very beginning and have stayed behind it every step of the way. That has led to the incredible success our Macintosh applications have in every category we participate in," Gates said.

Currently, Microsoft Excel, Word and Works dominate their respective categories. Microsoft Mail and PowerPoint also maintain healthy market shares.

"We have a more complete line of applications for the Mac and market share several times larger than in the [IBM] PC market," said Mike Maples, vice president of applications at Microsoft. "In terms of dollars per machine, which equals the ratio of Microsoft applications per machine sold, the Mac outdoes the PC."

Maples estimates that for every Mac sold, Microsoft nets an average of $110 in applications. Applications accounted for about $550 million of Microsoft's $1.18 billion in revenues for fiscal year 1990, which ended June 30. Mac software was responsible for more than 20 percent of that applications revenue.

Microsoft CEO and founder Bill Gates: "We made our commitment to the Macintosh at the very beginning and have stayed behind it every step of the way."

Maples said he believes some of the friction between the two companies stems from Apple's lawsuit alleging that Windows 2.03 infringes on the copyright for the Mac interface.

More recently, Windows 3.0 has caused Apple to flinch. Apple CEO John Sculley characterized Windows 3.0 as "just a face-lift for DOS."

Gates acknowledges that Microsoft is following Apple's lead on the user interface front. "The Macintosh has led the way to the graphical user interface, and we feel sure Apple will continue to add leadership features," he said.

But that hasn't slowed the acceptance of Windows 3.0. More than 800,000 copies of Windows 3.0 were sold from mid-May to the end of July, according to Microsoft officials.

"Apple views us as a threat or enemy," Maples said. "But we don't view Apple in that way. At the executive level, relationships are strained, but at the worker level we have established good relationships with Apple, and they support our efforts."

"Over the past year, Apple has come to realize that Microsoft is its main rival," said Peter Rogers, an analyst with Robertson, Stephens & Co. in San Francisco. "Without question, Apple is gearing up to meet Microsoft head on in terms of marketing system software."

Rogers pointed to the retention of Claris Corp. by Apple as a sign that Apple is circling its wagons.

"Apple doesn't want to lose control over its future, and Microsoft's dominance is a threat to that," said Ash Jain, publisher of the Macintosh Market Report in Irvine, Calif.

Gates said he doesn't expect Claris to alter Microsoft's course unless Apple decides to bundle Claris applications with Macs.

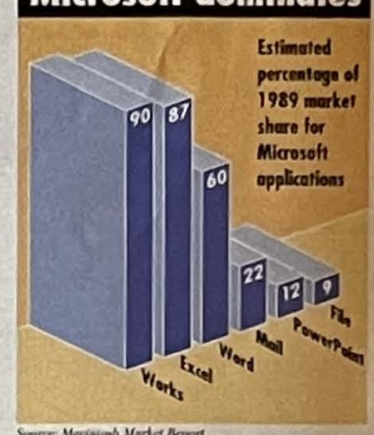
"We always worry about bundled applications, which would reduce the market for software significantly," Gates said. "If this move [to retain Claris] means Apple will innovate more quickly in system software, it is a smart move. But everything Apple is saying suggests that this move will not have a negative impact on the Mac software market."

Maples said he believes that Claris will be hurt if it is prohibited from developing for Windows or other platforms. "Customers want the same business applications running on all machines in a mixed environment," he said.

Whatever happens down the road for the two companies, Microsoft will continue to play a dominant role in the Mac market.

"We want Apple to succeed. The more boxes they sell, the more software we sell," said Art Schumer, senior Mac program manager at Microsoft. □

Microsoft dominates



Source: Macintosh Market Report

Earnings

From Page 187

income of $74.39 million, compared with $1.07 billion last year.

▸ **Maxtor Corp.** said revenues for first-quarter 1991, ending June 30, were $147.1 million, up from $108.5 million in the comparable quarter last year. Net income was $6.7 million, compared with $2.2 million in the same quarter last year. First-quarter revenues and pretax income were augmented by nearly $3 million in special payments.

▸ **Microsoft Corp.** celebrated its 15th birthday with $1.18 billion in revenues for fiscal 1990, a 47 percent increase over last year. Net income for the year, which ended June 30, was $279.2 million, up 64 percent. Revenues for the fourth quarter were up 53 percent to $337 million; net income rose 76 percent to $80 million.

▸ **Oracle Corp.** ended its fourth quarter of 1990 with revenues of $334 million, a 55 percent increase from the same period last year. Net income rose by 58 percent to $53 million, compared with $33.5 million in the comparable 1989 period. For the year, revenues were up 66 percent to a record $971 million, while net income jumped from $81.8 million to $117.4 million.

▸ **Quantum Corp.** ended its 1991 first quarter with record sales and earnings. Net income for the quarter was $17.3 million, up 50 percent from the same quarter last year. Sales for the quarter ended June 30 were $162.7 million, up 77 percent.

▸ **QMS Inc.** reported its third consecutive quarter of record results. For its 1990 fiscal third quarter ending June 29, sales were $69.74 million, up 29 percent from $54.02 million in the 1989 third quarter. Net income for the third quarter rose more than 51 percent to $3.79 million, compared with $2.47 million for the same period last year. □

MarketWEEK

STOCKWATCH

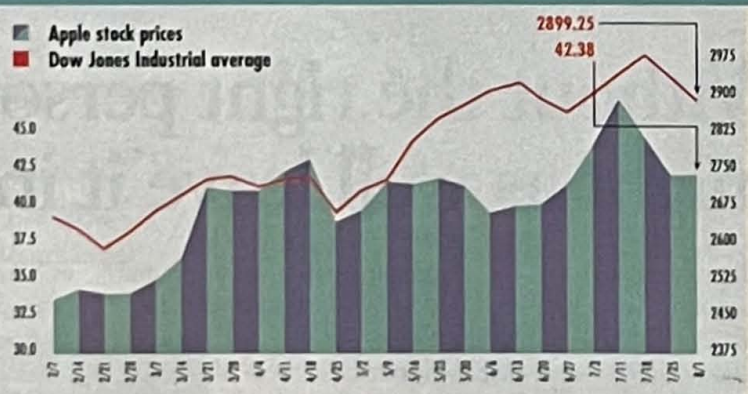
Lower-than-expected results send technology stocks down

When is good news bad? When the good news isn't as good as it should be. And that has become especially irksome lately, as professional analysts and their institutional clients downgrade a company's stock because increased earnings weren't as high as they expected.

Such was the case with Microsoft last week and Apple the week before.

Microsoft toppled 6.64 percent last week before coming to rest at $66.75, despite posting a 76 percent higher fourth-quarter net income of $80 million and 53 percent higher revenues of $337 million, compared with the same period last year.

Two weeks ago, Apple fell more than 5 percent, even though it posted 30 percent higher third-quarter earnings per share and agreed to buy back 5 million common shares. Apple had indicated that numbers this quarter could be lower because of product transitions.



Mac-related stocks

	CLOSING 7/25/90	CLOSING 8/1/90	PERCENT CHANGE	P/E RATIO	ANNUAL HIGH	ANNUAL LOW
MAC-RELATED COMPANIES						
Adobe Systems Inc.	36.75	35.50	-3.40	21	50.75	14.00
Aldus Corp.	26.75	28.00	4.67	22	29.25	12.25
Apple	**42.25**	**42.38**	**0.30**	**10**	**50.38**	**31.88**
Ashton-Tate Corp.	10.50	10.38	-1.19	-8	15.13	8.13
Businessland Inc.	7.25	6.88	-5.17	28	13.63	6.50
Microsoft Corp.	71.50	66.75	-6.64	29	80.75	26.88
Motorola Inc.	79.75	80.38	0.78	21	88.38	52.75
Seagate Technology Inc.	12.50	12.63	1.00	7	19.75	10.50
3Com Corp.	16.38	15.88	-3.05	23	19.25	10.00
INDUSTRY INDICATORS						
Digital Equipment Corp.	74.88	74.38	-0.67	138	103.38	69.50
IBM Corp.	114.75	111.63	-2.72	16	123.13	93.38
Sun Microsystems Inc.	33.50	31.50	-5.97	70	37.25	13.38

Compiled by Nordby International Inc., Boulder, Colo.

MARKETWATCH

Study reveals only moderate loyalty to the Apple brand

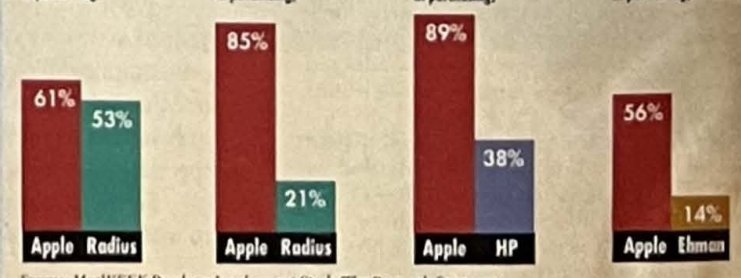
Despite Apple's dominance in Mac monitor, printer and storage device markets, there appears to be only moderate loyalty to the Apple brand, according to the recent MacWEEK Purchase Involvement Study.

For example, 50 percent of those respondents who said they would give an edge to an Apple monitor also said they would switch to another brand if a vendor offered important enhancements.

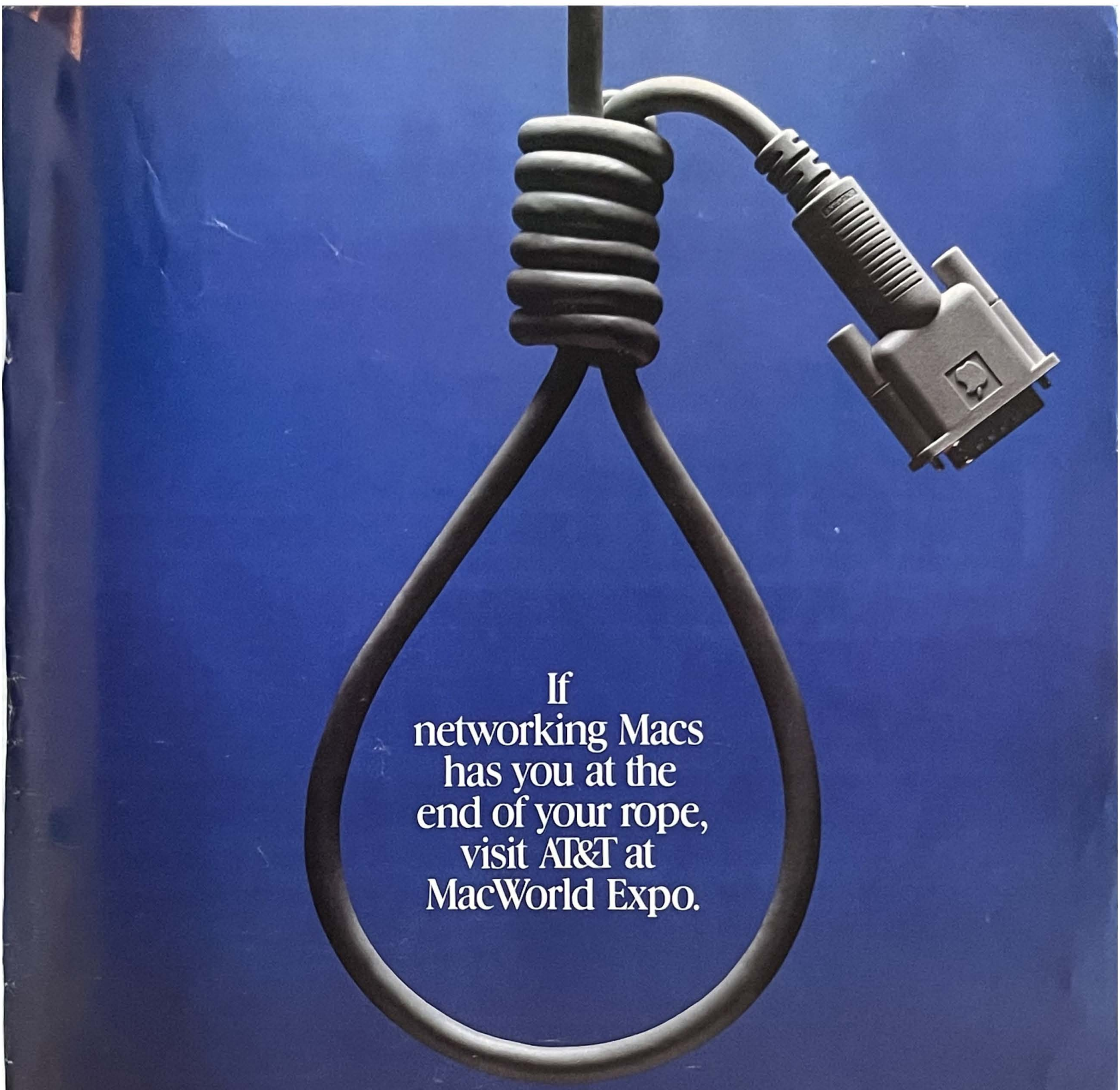
In terms of sales, Radius Inc. followed Apple in both monochrome and color monitors. Hewlett-Packard printers were second in popularity, and Ehman Engineering Inc. placed second to Apple in storage devices. — *By Nathalie Welch*

Apple dominates in Mac peripherals

Vendors most often used by MacWEEK subscribers in past 12 months for ...



Source: MacWEEK Purchase Involvement Study/The Research Spectrum
Base: Those involved in purchasing each category of product



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System 7, Part II: AppleMail

August is the month when the summer doldrums are punctuated by the decision-making process: Do the Boston expo? Watch Apple's scientific-visualization demo at Siggraph '90 in Dallas? Or just stay home and decide which small country to grab before all the good ones are taken? It was probably the parties that tipped the scales in favor of Boston for Mac the Knife. (And the prospect of yet another final farewell appearance by Jean-Louis, of course.)

Already somewhat exhausted from revealing important third-party product announcements ahead of time, the Knife decided to take a final pass at Apple before heading East. Since the long-rumored AppleMail project is one of the biggest in-house software-development projects Apple has ever launched, it seemed appropriate to get a status report. According to the Knife's informants, AppleMail is slated for inclusion in the first major update to System 7.0, which, naturally enough, will probably debut sometime next year.

Apparently, Apple will include a modestly robust front end for AppleMail in the Finder. The company's intent isn't to squash the third-party E-mail developers of the world but simply to get its fair market share, which is usually something between 30 percent and 100 percent. Apple is publishing its APIs so third parties can develop gateways to AppleMail.

The company also has finally taken steps to beef up the wimpy software included with the Apple Scanner. The Knife has learned that Apple has farmed out the task to Light Source Computer Images Inc. of Sausalito, Calif. To facilitate the process, Light Source reportedly is using the same Interactive Image Processing Toolbox it licensed to Aldus for a development project.

I want my NTSC. Although psychologists don't have a name for it yet, some users are suffering from a disorder that manifests itself in the form of an intense desire for Apple-logoed NTSC video capture and overlay. These desires may be satisfied this fall. Apple's offering will likely consist of a NuBus card for frame-grabbing and a small external box that handles NTSC in and out and audio.

Insiders say that the soon-to-go-public Radius, coming off the success of RadiusTV, is working on a new video-graphics card of its own that yields some pretty dazzling special effects. Stay tuned.

Big Mac. With the focus on lower-cost Macs, high-end Macs haven't received much mindshare lately. Is there no life beyond the IIfx? Some of the Knife's sources say that work on the '040 Mac is in high gear for release within the next year and that it will be twice the powerhouse the fx is. The beast will compete with all the other desktop personal workstations, and it will work with all well-behaved existing Mac applications. But down the road, the high end is expected to drift into the RISC world, where Mac applications won't hit the ground running. Apple will have to figure out how to make sure that a machine based on Motorola's 88000 RISC chip will be able to run those old favorites.

Just when it was beginning to look like the many rumors about a Mac version of Symantec's popular Q&A were a cruel joke, the Knife reports that the product is very real. Although you won't see it at the Symantec booth (primarily because there is no Symantec booth at the show this year), the favored few will have an opportunity to view demonstrations of Mac Q&A in a private hotel suite. It's all who you know, apparently. Those of you who don't really know anyone will have to wait until the January show in San Francisco, when Symantec hopes to be demonstrating the real thing in public.

Mac tonight? Can Mac the Knife keep a secret? Can you say "exclusive, private Mac the Knife party"? MacWEEK edit will be distributing invitations to the privileged (you probably know who you are) at the show between exciting product demos. Remember, no admission without an invitation, so track down your favorite MacWEEK edit contact and ask for yours. □

Hard to believe, but the Mac industry is more than baked beans and ice-cold Samuel Adams. There's insider information to trade and MacWEEK mugs to be earned. Get in on the action. If you miss the Knife at the show, get in touch at (415) 243-3500 or MCI (MactheKnife).

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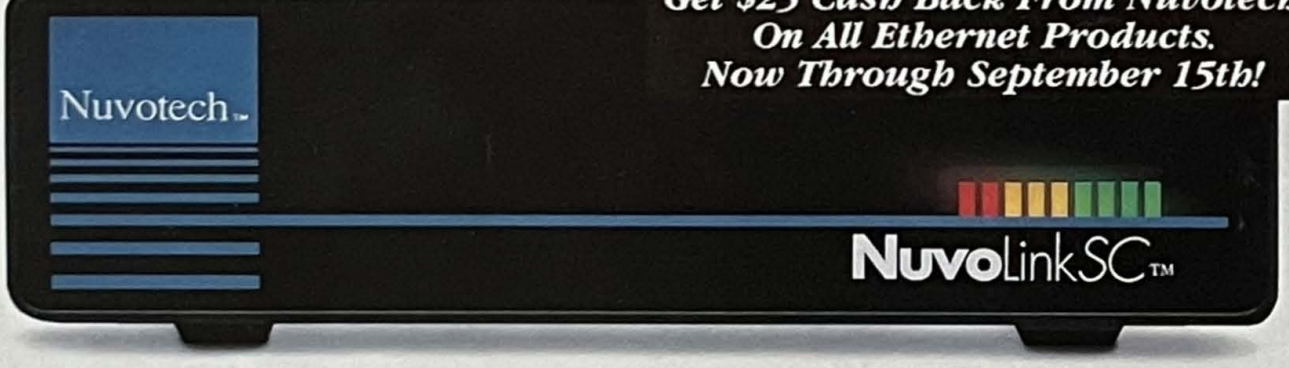

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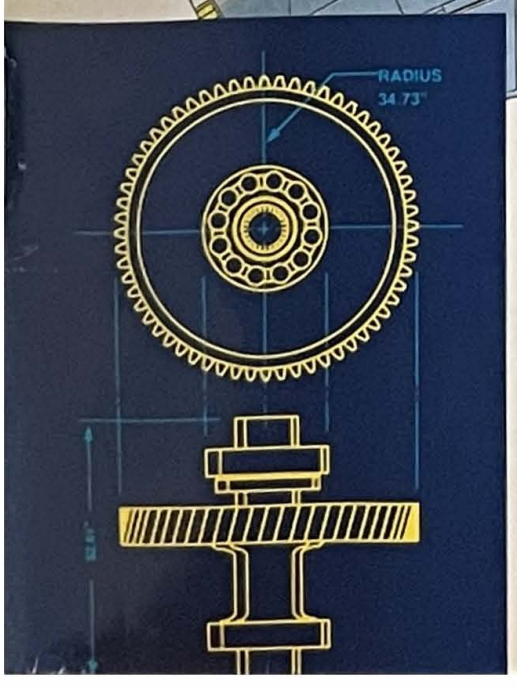

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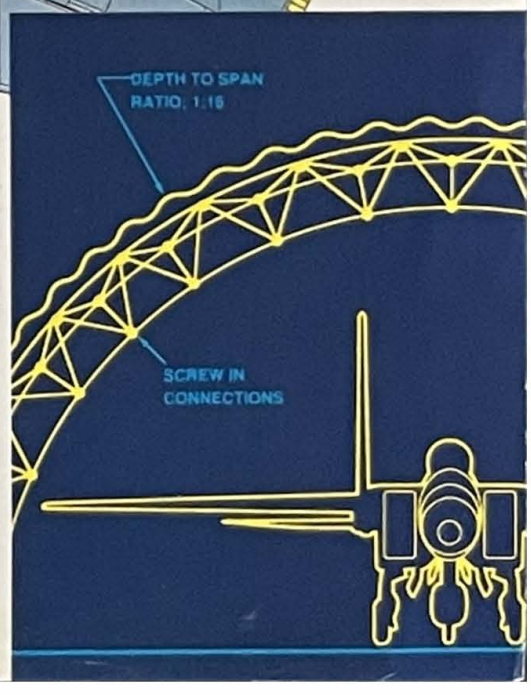

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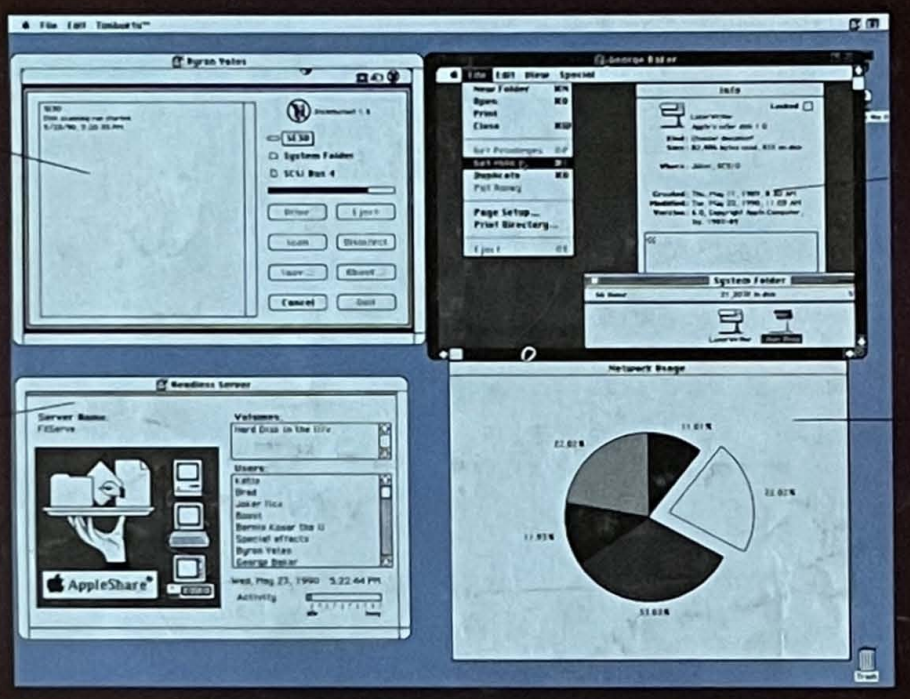

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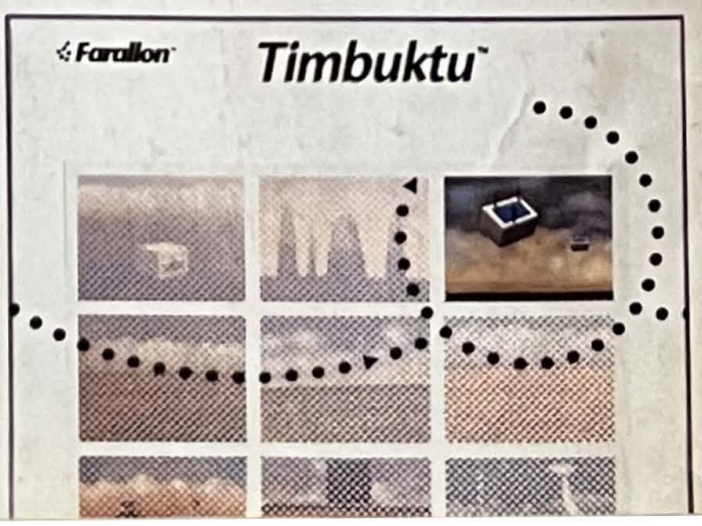

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